

# This Old House

NOVEMBER 2007

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**Fast Fixes**  
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## Built-in Storage

- 12 space-saving layouts
- 47 smart design tips
- 1 great DIY project

### Plus:

Six Steps to a Perfect Paint Job (P. 81)

Winter Container Plantings (P. 96)

How to Hang a Big-Screen TV (P. 35)

Using Engineered Wood (P. 69)

Great-Looking Bath Accessories (P. 39)

Designing an Urban Loft (P. 55)

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By an Old Farmhouse owner



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Make the most of your square footage with stylish, sleek, everything built-in.

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Lighten up your home's exterior using our 10 best cold-hardy container plantings.

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100



88



96

Winter garden: Pick the best cold-hardy containers and plants to green up your exterior.



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88 Built-in storage: how to design a DIY project

106 24 best fixes to get your house good really



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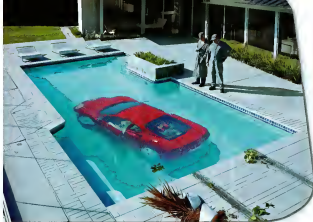
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**House**

**Keywords:** child sexual abuse; disclosure; self-blame

[illegible][illegible][illegible][illegible][illegible][illegible]

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TO TELL YOU WHAT  
THE CAR IS, NOT  
WHO YOU ARE.**

There is hope that we'll do much of this.

They don't make you sicker. They don't make the product better. In fact, a large means nothing. Unless, of course, the company behind it means something.

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**THE LOGO IS THERE  
TO TELL YOU WHAT  
THE CAR IS, NOT  
WHO YOU ARE.**

Truth is, logos don't really do much of anything.

They don't make you richer. They don't make the product better. In fact, a logo means nothing. Unless, of course, the company behind it means something.

So what, if anything, does a Hyundai logo mean? It means you're doing your homework. It means a 10-year/100,000-mile powertrain warranty and \$30 direct quality tests on every single car.

— GENE SHAW at Think About It.com

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## letter FROM THIS OLD HOUSE

### Attack of the Plastic Ice Bats

**NOW WHERE TO PUT MY WIFE'S** *Seinfeld*-figure collectibles? *Seinfeld*. She has dozens and dozens of plastic characters—accessories mostly, like the exploding Mole Man, Dark Star (the sci-fi version of Mr. Potato Head), and Ice Bat, who you see up there over my shoulder.

I put up with her habit because, well, I love us, or else she wouldn't let me keep the T-shirts I've had since college. Also I'm counting on the day I manage to talk her into selling them to eBay and make \$500,000, like Steve Carell's character in *The 40-Year-Old Virgin*. Used them, though, they're on the internet, or in the home office in cardboard boxes, or both.

We live in a new house built when most houses didn't have closets for people to overflow with junk or T-shirts. And though we've been remodeling, expensive options are limited when your property is only 20 feet wide. Which is why I'm so happy we've got the story on built-in storage on page 115, with eight pages of great ideas and projects. Maybe your wife has subway-figure collectibles too—no, mine likely, post-14-year-old-room-and-maybe-you-don't-have-much-storage-options, either. If so, I think you'll find "Bunk or Bunkin'" pretty useful.

Meanwhile, here's something I'd find useful: your help editing the June 2008 issue of *TCM*. Over the next few months at [thisoldhouse.com](http://thisoldhouse.com), we're going to ask you for cover suggestions, for photos of your own projects, for every homeowner tip and technique you've collected over the years. And then we'll ask you to vote thumbs up or down on all of it—or just one and those of you *Follow readers*—to see what should make it into the issue. I think it will be a collaboration that'll make a great magazine.

Then, though, we need to start planning. What would you put in the June issue if it were your call, when it's a? You can e-mail me with ideas for stories you'd like to tell, or even you want to read to help you solve your own home-improvement problems. Once we get enough, we'll exchange thoughts about them in print and online. Oh, and if any of your ideas tell how a genius man can defeat the small, plastic, but diabolical forces of evil that threaten the way of life, beg the eternal poverty I'm at [scott@thisoldhouse.com](http://scott@thisoldhouse.com).

*Scott Casperson*

SCOTT CASPERSON  
EDITOR



Help us edit *This Old House*.  
E-mail me your story ideas  
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## mail

### Post Office

I was struck by the conversion of a 1930s post office ["First Class" September] to a wonderful home. Congratulations to the homeowners and to TGW for the article.

POs of that era offered rustic painted in the lobbies as assistance to artists during the slow days of the Depression. I'm hoping there were also covered over in the cities. Those words were often treasured in themselves.

LEONARD MICALITO, MOBILE, ALA.

The editors reply: Ah, so far as the homeowner knows, her PO had no future.

### Ghostbuster

I was pleased to see "The house is haunted" as one of the problems mentioned in "Tiring With Deviants" [September]. It's surprising to see this very real and common phenomenon mentioned in such a down-to-earth magazine! As someone who has "cleared" many houses of "unwanted occupants," I have to say I would be surprised if the readers offered actually yes, it's true, but the advice that there is no cause for alarm is sound and should be helpful.

JONNY LYLE, COVINGTON, LA

### Tootledness

I have a 30-year-old daughter and wife of carpenter. The article "A Tootledoller" [September] really landed me up. As I have gotten older I have realized just how many people out there don't even know how to properly bring a heavy denton on a wall. This was a great article, and it reminded me how grateful I am to have a husband and dad who have taught me so much. Thank!

JESSICA COUGHLIN, ATHEL, MAINE

### Green House

Sometimes I feel different when I read your "First Class." "Think you know how to be a greener homeowner?" [Pro Ques] "Green House" [September]! Though I did poorly on the quiz, I can't help wondering if being content with my home as well as someone who is a greener attitude, if not more so, is that of someone who remains with green products? After all, where does all the following? I'm sure I don't all get used? recycled, it did but the match of it is perfectly



functional, just not aesthetically pleasing. Being content with my 1950s bathroom guarantees no unsolicited words for the landfill!  
DORIS BROWN, NEWARK, N.J.

### Sump Pumps

"Sump Pump Works Overtime" (Ask This Old House, September) a reader was concerned about his sump pump coming on two or three times a minute. I think your advice overlooks the obvious answer: The pump's constant cycling indicates that it has plenty of capacity to empty the sump in that it is emptying it faster than water can flow in (good). To change this short cycling, he needs a larger sump or a better pump. If the pump is larger, the pump then it will keep pumping longer until the sump is emptied but won't start again right away.

DAVID COHEN, NEW YORK, N.Y.

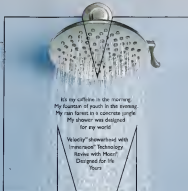
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## around the HOUSE

EDITED BY KEATY BERGER

### GET CRANKED FOR THIS

*A California collector puts  
his wrenches on display*

Unlabeled May had enthralled Carl "Bud" Bolt (yes, that's his real name) with his wife, Lita, while visitors enter their property from a charge to check out Bolt's ever-growing stack of vintage wrenches. Now his entire 3,000-piece collection, amassed over the course of 50-plus years, is on display at the aptly named Bolt's Antique Tool Museum, located in a remodeled industrial building in downtown Orinda, California ([www.boltsantiquetools.com](http://www.boltsantiquetools.com)).

Bolt, a former liberal New II mechanic and retired salesman for Sears-Roebuck, got hooked on wrenches at the tender age of 17 when his father made him develop his interest in the oil gear in the family car. Doing research for a lecture he gave at a tool trade show in 1963 convinced Bolt that modern America has depended on the wrench as much as he feels he has. "If we couldn't make two the wrenches, there would be no civilization and no world," he remarks, "where would we even live?"

To date, about 3,000 people have visited the museum to view his 150 years' old handmade box wrenches, and a 2011 Allen set wrench, as well as his other specialties and photography. For him, just very old tools are involved around him, but he says, "we're just another animal."

—NATALIE HENDRICKS



### SPEAKING OF WRENCHES



**Dayton WEA**  
The store at  
Columbus, Ohio, has been a center  
of adjustable wrench-making for  
years, churning out more than  
220 models at 100 to date.



**Bolt Doctor**  
In 1928, this  
the most health-  
based class  
Bolt's Forge is a record of 100  
all wrenches weighing 100 pounds to  
be used for measuring bridge



**Going Up**  
Several people  
are credited with  
inventing the  
wrench, including the  
Marinetti Club for Pioneers and  
the "Wrench" Model



## Are You Sure You're Insured?

Many people are shocked by the mishaps their policies don't cover

After an earthquake, a mold problem leaking into your basement—they all possible consequences of your home's natural disasters. But how is it covered by the typical policy? Surprised? So are a significant number of homeowners polled by the National Association of Insurance Commissioners (NAIC). Out of 1,000 surveyed, 61 percent of homeowners were not sure their policies covered flood damage. So even if flood insurance is included in your basic water-pipe-bursting policy, and 59 percent answered, they'd get a membership in an earthquake.

Any one of these disasters for which you're paying could turn out to be especially problematic. Many policies that natural disasters are accompanied by some form of flooding, and even though you're not a flood zone, standard policies may not include repairs and replacement of your home. Standard policies may not include repairs and replacement of your home.

### POLICE YOUR POLICY

• Call for updates before spring: before the home season begins.

• Make updates as needed: taking into account new policies, upgrades and new equipment that affect the value of your home.

• Read the fine print: NAIC's website (naic.org) has a checklist for making changes to your policy at the end of the policy year or when you get a new policy.

It's a good idea to get a new policy.

### TO USE

## OLD BLUE JEANS

More than 120 years old, Heller Jacob's Jeans survived a San Francisco fire that burned down the city's largest department store. The jeans are now a rare find, and Heller Jacob's Jeans are now a rare find.

1. **MAKE A HOLE IN THE JEANS.** Cut a hole in the jeans, but make it big enough to fit your head. Then, cut the jeans into a long, narrow strip. Then, cut the jeans into a long, narrow strip.

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11. **MAKE A HOLE IN THE JEANS.** Cut a hole in the jeans, but make it big enough to fit your head. Then, cut the jeans into a long, narrow strip. Then, cut the jeans into a long, narrow strip.



1st Quarter

2nd Quarter

3rd Quarter

## AT LEAST YOU CAN KEEP YOUR HEARTBURN FROM COMING BACK.

Prilosec OTC is the only over-the-counter heartburn medicine that works to provide 24-hour protection with one pill a day. It blocks heartburn before it starts, by stopping acid at the source.\* So heartburn, unlike other annoying things in life, won't keep coming back.



### THE ROUND-THE-CLOCK HEARTBURN BLOCKER

\*As possible with Prilosec OTC. Not indicated for 14 days for treating frequent heartburn. Not for immediate relief. © 2007 PDC Pharmaceuticals

### ORIGINS QUESTION

Back in the day, when only public, apolo, or polio-eyed kids were made for drilling, machine, Stephen A. Morse conceived a patented bit to power metal cutters easily.

What year did Morse's patent lead the competition?

A. 1945 B. 1975 C. 1994 D. 1995

(Clue to "Origins: Answer" page 102)





## OLD WIRES DIE HARD

A cartoon illustration of a wall outlet. Two power cables are plugged into the top two sockets. The cable on the left is on fire, with large orange and yellow flames coming out of the plug. The cable on the right is also on fire, with smaller flames. Below the top two sockets, there is a single switch and a ground screw. Below the switch, there are three more sockets, two of which are also plugged with cables. The entire outlet is set against a light brown wall.

### ► Five-Alarm Fine Print

ORIGINS ANSWER

- 3. **Stop inventing a single crisis.** An invention happens when a people get too much, involving no plausible "crisis" increases and decreases in the same audit.
- 4. **Don't "overcome"** by putting a 100-watt bulb into a socket rated for 60 or 40 watts. The additional heat damages the wires, insulation, even time, making them dangerously hot.
- 5. **Avoid taking shortcuts** with OVI projects. Spend your time in the more than paid for a spirit and when you are working in the way you will have to take a safety in the future.
- 6. **Resist or replace** when using employees. This is a common mistake in the design of a new product.
- 7. **Measure and replace** for employees under 100. A measurable and a changed project may make a clearly comparison. —MATT HOSKINS

**D DRILL.** With a life that humbled not metal filings as readily as it inspired shavings from wood, Morse Tool Drill and Machine Company in Bedford, Massachusetts, became one of the largest tool suppliers for manufacturers of guns and sewing machines. Now these life size standard lives in most drill bits.



# PONDERINGS OF A **PLANTAIN**

I don't know how they do it, but some things just never lose their visual appeal. Me, I tend to look good for about a week, maybe ten days if I avoid full sun. After that, I start losing my charm quickly. I wonder if there's some special preservative out there that would give me that timeless look.

[illegible]

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## KITCHEN DESIGN



**BEFORE:** The color-divorced blue-green kitchen had a cluttered feel—and some awkward cabinets.

**AFTER:** New base cabinets, open upper storage bins, and a softer yellow-green paint and backsplash on the countertop put the room's sophisticated look. The new island's openness from the dining area by a 42-inch high cabinet with glass doors. A skylight brightens the space.

Problem: A previous remodel had left certain areas dysfunctional

**Solution:** **Redesign in small ways to tweak what wasn't working. Here's how >>**

WHEN IT COMES TO CURRING YOUR HOME SKILLS, as with your own, a kitchen goes to a specialist. Jason and Irene Jacobson learned the hard way. Shortly after moving into their 1930s North Tustin, California, ranch house in 1998, they remodeled the kitchen with help from an interior designer. While pleased with the way the new space looked, they found some quirks. Drawers to the left of the range didn't open at all. ("That happened sometimes," they were told by the designer, who did not have a strong experience in kitchen design.) Closets to the right were so deep as to be useless, and absorbed a tall pantry case that limited elbow room while cooking. Plus, the in-level island had a steep work surface. "The room was aesthetically pleasing," says Irene, "but functionally, it had challenges." Fast-forward several years. While adding on a master suite, the couple started talking to kitchen and bath designer Dana Jones about their kitchen. "We realized a few changes could make a huge difference," says Jones, who suggested relocating the laundry—which sat in a closet in the L-shaped space—to the addition. Moving it created a dining nook, cooking room for a walk-in pantry and for reconfiguring the area around the range. "We didn't want to redo the room from scratch," says Irene. "Little tweaks made a big work."

PHOTO: JAMES HARRIS FOR THE KITCHEN DESIGNER

BY JILL CONNORS  
PHOTOGRAPHS BY  
GREGORY SEGAL



## The Plan

>> Make the fewest changes for the greatest impact

### What They Did

1. **INSTALLED A LAZY SUSAN** inside the cabinet to the left of the range, reflecting range-side drawers from the previous remodel. The turntable is now hidden behind a double-hinged corner cabinet door.
2. **ADDED AN UPPER CABINET AND LOWER DRAWERS** to the right of the range, replacing a super skinny (cassia) cabinet and a full-height pantry unit that made the cooking space cramped. A new section of glass-tille backsplash and a double glass-cabinet door lined with the rest of the kitchen.
3. **MOVED THE LAUNDRY** from a closet in the kitchen to the addition and converted the area into a walk-in pantry for food, condiments and coolback storage.
4. **ADDED A SKYLIGHT** to bring much needed natural light into the room.
5. **WIDENED A DOORWAY** to the hall to improve traffic flow into the kitchen.
6. **RECONFIGURED THE ISLAND.** The base remained, but the countertop was changed to one 35 inches high, comfortable for both working and eating. A 42-inch high cabinet was placed along one side to screen it from the dining area.

**BEFORE**—Cabinets backing the range were a tight squeeze in the D-day 48-foot L-shaped kitchen. The number and style were located behind solid doors, so laundry piled up on the floor in plain sight. **AFTER**—The kitchen all new holds a 48-foot L-shape, plus a dresser-like three-storage unit and a smaller storage under desk. The location of the sink and appliances stayed the same.



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—DANA LONG, KITCHEN AND BATH DESIGNER



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## The Details

>> The spirit of the kitchen's retro-modern look is true to the ranch house's 1950s roots

1 **HONED BLACK GRANITE COUNTERTOPS** replaced bright red solid surfacing (which the homeowners found that they quickly tired of) for a more sophisticated aesthetic. The existing countertopless tile backsplash and green-tinted tile are staged.

2 **THE WALK-IN PANTRY** is partially hidden behind a raised glass door, then shelves on three sides. The lowest shelf is 18 inches off the ground, providing room to store bagged items. Repainting the walls and cabinet built into the space.

3 **THE OVERSIZED BRAVER UNIT** built under one of the two windows provides a place for linens and other kitchen necessities.

4 **A SIMPLE, CURVED BRACKET** supports the new desk area, reflecting the room's open, casual sensibility.

5 **THE FRAMED CORNBORAD** above the desk serves as the family's photo and message center, large enough for a laptop. The desk surface provides an extra spot for checking e-mail.

6 **BLOWN-GLASS PENDANT LIGHTS** showcase the colorful spot of the first ranch model, which was subtly streamlined in the redesign.



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PHOTOGRAPHY: KATHARINE D. PETERSON FOR FORD

**Problem:**  
The house had no comfortable guest quarters.

**Solution:**  
**Annex the garage, raise the roof, and build a luxurious suite. Here's how**

**WHEN EMBRY MEET SYDNEY:** Lucks in, most couples think about downsizing. But when the owners of this Chappaqua, New York, home found that their grown kids were frequently bringing friends home to an increasingly cramped-down table, they realized they'd need more room than ever. "We were eating 20-something adults at their own 'kick' table," says the husband.

So the couple enlisted the help of architect Cassi Karth as rethinking their home. The result was a whole-house renovation that included converting the old, attached garage into living space. Karth also suggested raising the garage's roof and using some of the unobstructed area for a separate guest suite. While the bedroom boasts a walk-in closet and lots of natural light, it's the bathroom—with its luxurious two-person soaking tub and serene views of nature—that's the real star of the space. "The idea was to have a guest bath that's as comfortable and relaxing as the master bath," says the architect. Following the homeowners' admission not to be "too country or too modern," Karth warmed up the room with Chippendale-inspired details such as wood trusses, bronze fittings, and stone-looking tiles and included amenities like a separate toilet room and twin sinks.

Since that completion, the guest quarters have been put to good use by the couple's grown children and their parents, coo—essentially in hopes. "It's important for us to make this house a place where our family wants to come back and visit," says the husband. It looks like they'll have no trouble keeping the suite booked for years to come.

BY NATALIE RODRIGUEZ  
PHOTOGRAPHY BY SHELLEY T. WEBER

## BATH DESIGN



**BEFORE:** The homeowners could only stand up to the 4-foot-high walls above their old garage, which was overcrowded with exposed wiring and ductwork. After, with the roof trusses up, the new bath has a airy, vaulted ceiling. Custom-made lighting showed space that vaulted beams preserve the space but bring. Stained-wood vanity cabinets add more warm wood tones.



## The Plan

Renovate part of an unfinished attic to fit a spacious, amenity-filled guest bath

### What They Did

1. **CONVERTED AN ATTACHED GARAGE** into living space, raising the roof to fit guest beds, uplighters and sliding doors on one side. The bedroom now finished ceiling height reaches 11 1/2 feet at its peak.
2. **PLACED A TWO-PERSON SOAKING TUB** in the center of the room to create a focal point. Two large double-hung windows behind it offer views of the enclosed backyard and the surrounding woods.
3. **POSITIONED THE SHOWER** on one side of the tub and a merchandise room that provides access to renovated wing and AD studio on the other.
4. **ADDED HIS-AND-HERS WALKERS** opposite the tub.
5. **CARVED OUT A SUMMERY TOILET ROOM** and linen closet with pocket doors, allowing more than one guest to use the bathroom without sacrificing privacy.

**And more subtle...** See how other homeowners add their own design profiles to their house complete.



**BEFORE:** The attic space above the old garage was unfinished and had very little head clearance. **AFTER:** The renovated 12 by 20 1/2-foot space is outfitted with a large soaking tub, two sinks, a shower and a separate toilet room and linen closet.



**GLIDING UP TOP LEFT:** Space-saving pocket doors in the toilet room open to a linen closet that stores a rich forest and bedding for guests. The muted beige wallcolor of the shower looks casual like a visit to the beach, serene ambience the homeowners want after 40 rubber-duck fittings by Peter & Brown of the Craftsman inspired decor. An accessible niche in the first shower provides ample space for guests. Before, larger windows and a broom closet shower door maximize natural light in the space. Good sound-absorbing acoustics is a natural detail.

**BUILD YOURSELF**  
Love the look, make a list:  
Shower niche  
Bathroom p. 10



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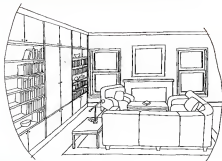


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**Q** We just got a big flat-screen television, and now it's the dominant design feature in our family room. What can we do to better integrate it into the space?



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HOW TO BEST  
HOW TO BEST**  
By mounting the  
TV between built-in  
cabinets, there's less  
temptation to watch  
it. Plus, being the wall  
with bookshelves  
encourages reading  
or studying without  
distraction from  
the television.

**A** THE AVERAGE TELEVISION is on a staggering seven hours a day. That's a fact of American life that, as an architect, have to incorporate into the design of any home I'm working on. When planning a family room, one of the first things we do as my firm is ask about your lifestyle and viewing habits, because that tells us how much prominence to give the TV.

Assuming space is less in your household (on average, the trick is to design a space that allows for pleasant, comfortable watching while ensuring that the room also serves its other purposes. The best way to do that is with a flexible seating arrangement (see illustration, above). In this example, a sectional sofa offers ample seating for TV watching or gathering around the coffee table for a good game of Scrabble, and the easy chair can be turned around for quiet reading by the fire. When we want to mood-swinging the family room into a home theater, where everyone just zones in the television without interacting.

TEXT AND ILLUSTRATIONS BY  
WARREN FREYER

Warren Freyer is a design professional and  
collaborative architect in a 10-person  
firm in New York City specializing in  
residential design and technology.

### 1 | A Multipurpose Floor Plan

Since the idea of the family room is to bring everyone together in one multifunctional space, here are a few of my tricks for setting up a television without disrupting the exclusive environment. **Placement.** Keep the TV at a 90-degree angle to the room windows. That way, it doesn't interfere with anyone's ability to look over and enjoy the view. (It also helps cut down on glare, a common problem with daytime watching.)

**Screen size.** The best TV isn't necessarily the biggest one you can afford. What you want is one that's the right size for your space. The general rule is a viewing distance of roughly two to three times the screen diagonal. So a 40-inch screen, for instance, is best viewed from about 7 to 10 feet away.

**Acoustics.** Carpets and drapes filter out some of the rumbly bass of film sound effects but can absorb a little too much from music. So the best approach here is to make out a middle ground. Since the room will be used for entertaining as well as for TV watching, some sound-dampening fabric (say, cushions, but don't carpet the room from wall to wall) and/or every window with heavy drapes.

**Lighting.** Since this is a multifunctional room, you'll want diverse lighting. (I say as all) for movie watching, soft light for entertaining, and task lighting for reading and homework. I like to put recessed overhead lights on a dimmer, ample reading light by every chair, and sconces around the periphery of the space for accent lighting.

### 2 | Hang It or Hide It?

One nice thing about flat-screen TVs is that, unlike old picture-tube TVs, which can be space-hogging misanthropes, these look good even when they're turned off and don't necessarily need to be hidden behind expensive custom cabinets. But if you think your family will gaze at the screen as the television if it's in plain sight, does it recommend housing it in an entertainment console, as in the illustration on the previous page. Audio and video components can be concealed behind doors, where they're easily accessible but don't create visual clutter.

If you decide to mount the TV on the wall, you'll need to keep any other components in a cabinet below (see illustration, right) and run the wires behind the wall. For a more customized look, at least one manufacturer has started to offer picture frames, in a variety of styles and finishes, specially made to fit the flat screen.

### 3 | Out of Sight, Out of Mind

If your family is in the minority that sees less television infrequently (I'm trying to cut down), I'd suggest keeping the set out of the family room altogether and instead creating a true separate space that can also double as a den or study area. In this scenario, the television shares a room filled with books and is given a warm, cozy but perfect for occasional *I Love Lucy* marathon. I would close off the space with a solid wood door to keep it visually and psychologically separated from the rest of the home. ■



For more tips to hang your TV on the wall, go to [doitright.com/flatpanel](http://doitright.com/flatpanel).

**AN IDEAL SCREEN SPACE** The L-shaped sectional provides seats for TV viewing as well as for going into the fire. A pair of easy chairs can be used for reading and relaxing or serving around for your Super Bowl party. A small computer nook with a sliding door offers you a place to work in privacy or remain connected to the family room.

**IN PLAIN SIGHT** Since the new generation of flat-screen TVs is so sleek looking, you can hang one on the wall and hide audio and video components in a cabinet below. Wires must be routed behind the wall to keep out-of-sight clean modern look.

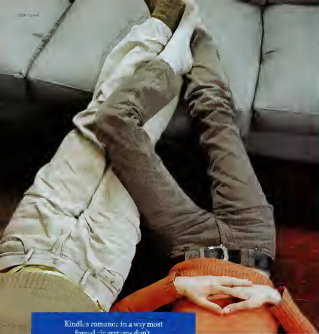
### GOT A QUESTION FOR AN ARCHITECT?

In this column, an architect will answer a reader's home-design query. If you send advice on anything from how to style your kitchen to the best way to put a window in a room, please send your question along with a photograph of your plan to: [HouseCalls@ThisOldHouse.com](mailto:HouseCalls@ThisOldHouse.com). This Old House magazine, 125 West 50th St., New York, NY 10020. If your question is selected, the answer will appear in an upcoming issue. Due to the volume of mail, we cannot answer unpublished questions.

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LUXURIES



## No Holds Barred

» Great-looking hooks, rings, and bars can bring new style and comfort to your bath

BY KATHLEEN WOODHART  
PHOTOGRAPHS BY ELLEN WOODHART

WHEN IT COMES TO EXTRAVAGANCE, the bathroom is the one place in the house where homeowners are most likely to let it out. But even if you don't want to spring for a spa-style tub or custom-built stone shower, you can still add style and personality with affordable accessories. Stacked towel or robe rings, vintage or contemporary, in smoky bronze or polished chrome, or studded with leather or crystal, don't a room of bath wear that's right for your space. And you don't have to stop at one: dressing your towel rack with your color paper holder, body accessories are accessories offered as part of collections that also include faucets, showerheads, even toilet tank levers. Plus, installing a few well-placed hooks and bars can significantly improve functionality and comfort as it makes the look of a room, all in the space of an afternoon. Here are some choices to get you started.



**THE GOOD GUY**  
If you're in a tight situation to be surrounded by towels when nature calls, this pedestal is all you need. It's a modern, minimalist design that's also a towel rack. The pedestal is a "Towel" rack that will keep a towel over a toilet. Towel rack \$40; ring \$20; paper holder \$20; soap dish \$10. [www.uponor.com](http://www.uponor.com)



1 | **COORDINATED FINISHERS**

Instead of settling for the beige water tank cover you own, swap it out for one that complements your bathroom style: polished chrome, antiqued ivory or the rich, lived-in rubbed bronze (left). \$65. Inspired Chrome (bottom), \$24. [pe.usa.com](http://pe.usa.com)

2 | **HALF CIRCLE**

This open ring can easily travel through a part of a complete collection that includes towel bars and faucets. The 10 1/2-inch-dia. oil-rubbed bronze with copper teardrops—notes for an eye-catching, coordinated, elegant light background. The brushed-steel (bottom) towel ring, \$37. [pe.usa.com](http://pe.usa.com)

3 | **DOUBLE DUTY**

Bring out style in a sleek space saver to coordinate the job of delivering water on this chrome number are also great for drying, double-handled washcloths. Showerer head set, \$130. [pe.usa.com](http://pe.usa.com)

4 | **BATHROOM HUNG**

Swivel crystal accents give this modern-style double robe hook a little touch—the perfect compromise for a his and hers modern bath. Crystal Crystal double robe hooks, \$154–\$155. [pe.usa.com](http://pe.usa.com)

5 | **GREEN ERIGE**

Handless inspired towel rings designed out of Zen are infused into your bath like the potted lotus. They're modern, contemporary, cast-iron, hand-forged, too. [pe.usa.com](http://pe.usa.com)

6 | **TEMBUR**

For a rustic cottage retreat or farmhouse bath, single unadorned wood rings fit in nicely. This paper holder, modern, elegant, heavy, hand-forged, too. [pe.usa.com](http://pe.usa.com)

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**7 | QUICK HOOKUP**

The best use of this double-duty shower heads makes making it easy to hang multiple shower heads in the bathroom. \$26. [www.houzz.com](http://www.houzz.com)

**8 | CLASSIC BLACK**

Design your point-to-point shower to match the rest of the bathroom. The black and white series on these black shower heads is a classic. In any room, there's a country style to a two-dimensional design. Shiny black double shower heads. \$27. [www.houzz.com](http://www.houzz.com)

**9 | HIDE AWAY**

If you don't have wall space for a full-size outdoor shower, a wall-mounted shower head is a great idea. The best of both worlds. Perfect for the outdoor shower head. Lushield shower head. \$43. [www.houzz.com](http://www.houzz.com)

**10 | VINTAGE FLASHER**

Complete your perfect bath with a reproduction brass and polished brass shower head. Lushield shower head. \$43. [www.houzz.com](http://www.houzz.com)

**11 | DISNEY-INSPIRED**

An old-fashioned concept, the Disney-inspired shower head is a classic. In any room, there's a country style to a two-dimensional design. Shiny black double shower heads. \$27. [www.houzz.com](http://www.houzz.com)

**12 | A TOUCH OF CLASS**

Black and white series on these black shower heads is a classic. In any room, there's a country style to a two-dimensional design. Shiny black double shower heads. \$27. [www.houzz.com](http://www.houzz.com)

Never use a towel rod as a grab bar. They aren't designed to support a person's weight.



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SALVAGE



## Cast With Character

» Do as the Victorians did and use ornamental hinges to enhance your interiors with tiny details

BY AMY R. ANDRES  
PHOTOGRAPH BY SARAH WILSON

I WAS FLIPPING THROUGH the newspaper a few weeks back when my eye landed on a photo of door hardware that matched a vintage lamp I'd recently acquired at a Texas salvage shop. The hinge, which depicted two Japanese gnomes standing on a bridge—one cloaked by a parasol, the other uncloaked under a lantern—was cast in the late 1800s by Connecticut metalwork manufacturer Russell & Brown.

The ornate brass plates in the picture were the same style but told a different story, with a woman carrying a bell down the hallway of a tall pagoda. My interest peaked, I read the accompanying writing of an inclusion of late-19th-century household brass goods at the Reed Graduate Center for Studies in the Decorative Arts, and planned a visit.

The show had door hardware, but also lamps, glass vases, and English antiques, many featuring Japanese motifs, such as swooping cranes, delicate cherry blossoms, and bamboo lattice work. Designers during the American Victorian era were rather obsessed with all things Japanese after seeing porcelain vases, lacquer urns, and other imports from their country at the Centennial Exhibition of 1876, in Philadelphia.

What amazed me was that these intricately patterned objects were mass-produced in factories, rather than hand-forged in artisan shops. Cast in brass,

TIP

Get carved hinges (shown moving freely as their center pins by turning the rings) into 1920-40 vehicles because the detail between the metal and wood.





The pretty hinges seen at Clowery Antiques in Gainesville, Texas.

brass, copper, and steel near the end of the Industrial Revolution, the source was sold in catalogs to style-conscious consumers looking to embellish their interiors.

The designs were born out of the Arts and Crafts Movement, which advocated "art for art's sake" and a return to traditional society. Its influence on American design-to-day lives is perhaps most strikingly evident in those beautiful yet unobtrusive iron door hinges. And even though some of the late 19th-century hinges at auction and salvage yards today—except for that Russell & Erwin one with the griffins—aren't such a useful inclusion in a museum exhibit, they are no less astounding for the level of detail applied to something so

seemingly insignificant. I mean, you don't even see the hinge leaves when the door is closed. When you do see, however, is the center barrel in which the hinge pin is inserted to hold the leaves together. The barrel on the pretty hinges, for instance, bore a peach-blossom motif. But I have seen others, for simpler hinges with scrolling vines, flowers, leaves, and geometric patterns along their spans. Even the pins were decorated, with tips shaped like diamonds or church spires.

The relative affordability of these more ornate hinges, which typically ran \$15 to \$30 apiece—compared with up to \$180 for a massive working one—makes them popular with home-pier aficionados like me. They are great for looking together and shatters for a folding screen (see how, below) or for hanging the top of a storage trunk or writing desk. Then there's always their obvious usefulness in hanging doors. Such a practical application may seem like a bit of a waste of such small works of art, but those old Americans would be proud to know their ancestors so say details hasn't been lost on modern-day homeowners. ■

## How I Turned Salvaged Hinges and Shutters Into a Folding Screen

The hardware bin at Old Good Things in New York City overflowed with cool, but very dirty, door hinges in different styles. The challenge for me was unearthing four that were the same size and style. I wanted to use them to link together three vintage wooden shutters to make a folding screen for my bedroom. After more than an hour of digging, as well as searching for something to wipe my hands on (I'm never near white gloves to a salvage yard), I finally settled on a matched lot of 3-1/2-by-25-1/2-inch door hinges with cutout designs and sleeper toes. Making the screen was the easy part—to show off my finds, I simply screwed the hinges to the face of the shutters, either from the inside or the outside.

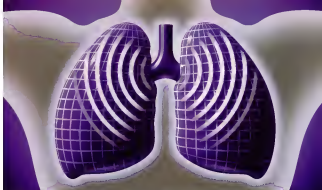
**1.** Lay the shutters side by side on a worktable, and align their bottoms using a straightedge. (Shutter heights may vary, so be sure to use the bottoms as the baseline when taking measurements.)  
**2.** Arrange one pair of hinges along the gap between two shutters, about a foot down from the top, and the other the same distance up from the bottom. How measure from the bottom of the shutters to the bottom edge of the hinge leaves and mark their locations. Transfer these measurements to the back of the third shutter to position the second pair of hinges.  
**3.** Mark the locations of the screw holes, remove the hinges and predrill the fasteners. Reposition the hinges and drive in the screws.  
**4.** Set up your finished screens and kick back with a beer. —B.J.H.



**ONLINE VIDEO**  
Want to see how I turned salvaged hinges into a folding screen? Visit [www.istockphoto.com](http://www.istockphoto.com)



Photo: istockphoto.com/131014



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# This Old House Greenlist

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## This Old House GreenList



Welcome to the inaugural episode of *This Old House Greenlist*, your resource for all things Green. From rainwater harvesting to solar energy, we're covering it all. *This Old House* has always promoted the benefits of green building. To learn more about the best practices, products and products that can help you ensure your home's impact on the environment, visit [www.thisoldhouse.com/green](http://www.thisoldhouse.com/green).



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## Thinking Outside the Bulb

» As Edison's incandescent burns out of favor, compact fluorescents and LEDs prepare for their turn in the spotlight

BY KETH RANDOLPH

THE INCANDESCENT LIGHT BULB has enjoyed a pretty good run. Introduced to the world on December 31, 1879, by Thomas Alva Edison, this miracle of Victorian ingenuity faced few competitors and has remained a cheap, reliable source of artificial light for well over a century.

But its long tenure at our default lighting choice may soon be coming to an end. As an increasingly worried nation starts to think seriously about how to slow the emission of greenhouse gases, lighting is emerging as one of the chief targets. California and New Jersey are considering banning the sale of incandescent bulbs altogether. Mega-retailer Wal-Mart wants to tip the mainstream consumer scales toward compact fluorescents (CFLs), vowing to sell 100 million of them this year.

Other new lighting options are starting to ramp up on store shelves, including high-efficiency halogen bulbs and the Holy Grail of green lighting, the LED. Here's a look at what's available now, and how these new products will affect the quality—and the cost—of lighting your home.

### LED: THE OTHER WHITE LIGHT

When it comes to green alternatives, the light at the end of the tunnel might just be the LED, or light-emitting diode. Unlike incandescents, LEDs don't have filaments to burn out, and, more importantly, they don't waste the majority of their energy output on heat. Instead, they dissuade via the movement of electrons in a semiconductor material.

"LEDs have the huge potential for the residential sector," says lighting designer Nancy Clifton, founder of Colorado-based Clifton & Associates, a company specializing in

According to EPA estimates, homeowners spend a quarter of their energy bills on lighting, at a cost of more than \$37 billion each year.

PHOTO BY JAMES HARRIS FOR  
GREEN HOUSE

**LED LIGHTING** Unlike CFLs, with their trademark teardrop shape, LEDs have yet to develop an iconic shape. Some look like traditional incandescents, while others, with their clear glass and exposed solder, look like something out of 2050. Not to fret: The advantages to some LEDs are best realized when they keep the bulbs cool to the touch.

sustainable lighting design. "Where CFLs fail, LEDs will surely take over. And color? Oh, my gosh—prices pretty much did up any color you want even an LED."

Solar LEDs have been used commonly in dashboard and outdoor lights and traffic lights. But a few companies are starting to produce them for the home. Dallas-based Lighting Science, for example, offers LED bulbs that resemble incandescents in appearance and can be screwed into any standard socket. While light quality and color are on par, and the bulbs aren't nearly as bright as incandescents and, at least for now, are better suited for use as desk lamps or reading lights. Other companies, such as C. Crane and Ledtronics, are also offering LEDs, but doing guys—namely GE, Philips, and Sylvania—aren't about to let you away from introducing that once version.

"The bulb we affiliate right now is one," says Lighting Science president Ron Link. "The efficiency experts tell they are sufficient problems." Indeed, his company's 30-watt "warm white" bulb costs about \$30. But Link expects to price out that a cents 70 percent less in one shot on incandescents and cost savings to 50,000 hours, compared with a CFL's 10,000 hours and an incandescent's 1,200. "Given a payback standpoint, it's almost free," says Link, adding, rather emphatically, "I truly believe that LEDs are the future of lighting."

#### COMPACT FLUORESCENT

Unlike fluorescent tubes, the design of the germ killing world in the cheap, super-efficient, and readily available CFLs. They use two-thirds less energy than incandescents and last up to 10 times longer. Each incandescent bulb you replace with a compact fluorescent bulb you will save with a compact fluorescent bulb you will save \$10 on energy bills over its lifetime. Best of all, CFLs cost little more than incandescents—about \$3 to \$5 for a 26-watt (equivalent to a 100-watt incandescent). New three-way and dimmable versions are \$13 to \$16.

If you haven't tried one of these bulbs, you might be surprised by what you see. "A lot has happened to the CFL

side just five years," says Kim Trueman, of GE's Consumer and Industrial division. "The light quality is better and cost nearly as low. It's much more like an incandescent." Other design problems, such as inconsistent beam size, have been minimized, too. Still, CFLs aren't perfect. The biggest kink—and the one that's got environmentalists bothered—is that they contain mercury, meaning they have to be disposed of as hazardous waste to avoid contaminating our landfills and water supplies. Still, if the bulbs are disposed of properly, the benefit outweighs the risk. After all, since the mercury in CFLs creates more efficient lights, we save power, thereby reducing emissions from power plants—including mercury.

#### NEXT-GENERATION HALOGEN

The halogen bulb—basically an incandescent infused with halogen gas—has long been a popular alternative to traditional bulbs. Halogens burn twice as long, use 10 percent less energy, and produce richer, brighter white light. But they still burn hot and, like their predecessors, waste a lot of their energy on useless heat.

GE, Philips, and Sylvania are all selling out new halogen bulbs that are more efficient than their previous offerings and, on average, last about three times as long as incandescents. GE's Reveal bulbs last around 2,250 hours and cost \$4 to \$5, Philips's Halogen Energy Saver bulbs last 3,000 hours and cost about \$5 a pop, and Sylvania's Crystal A-Line halogens last up to 3,500 hours and cost \$7 to \$9.

Even the standard incandescent is headed for a makeover. "We are going to work continuously on more energy-efficient incandescents," says Sylvania's Jennifer Dallas. The company just came out with the E-Logic bulb, which uses 40 percent less energy and lasts 50 percent longer than a standard incandescent. One-third smaller than a regular halogen, it comes packaged four to a box. (Eco-bonus: The packages are made of recycled paperboard.) Within a couple of years, GE promises an incandescent that will be nearly as energy-efficient as its CFLs.

"A lot of people still like incandescents," says Trueman. "It's simply another consumer choice." So no matter which type of illumination you prefer, at least some of energy efficiency's clear benefits are beginning to see the light. ■



GE's E-Logic bulb lasts twice as long as standard incandescents, uses 40 percent less energy, and is made of recycled paperboard. For more information, visit [www.energystar.gov](http://www.energystar.gov)

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THIS OLD HOUSE MAGAZINE SHOW LOFT 2007

## Less Gritty in the City

» Drills and dust didn't faze this couple—until they had kids. Now, with help from This Old House, they're refining their former industrial loft into a more comfortable home

BY KELLY BEHREND PHOTOGRAPHS BY JOSHUA PAUL PRODUCTION BY COLLETT SCARLEIGH OTTE



ABOVE: The Fulton Street building circa 1940 when it was a warehouse and storefront for Dewey's Filmex. In 1998, Sterling Optical moved in, relocating from east town BOSTON. The gray painted tubular facade and brick lobby

AT FIRST THEY JUST WANTED to make the 1940s-era loft livable. For Sam Lagergale and Ed Wood, just getting their hands on 3,800 square feet of precious Manhattan real estate in 1997—a peak in demand for power lofts—was a coup. Sobering to clear the former optical factory on Fulton Street of decades of dirt, paper droppings, and unused equipment—not to mention needing to plumb new bathrooms and kitchens—would be well worth the payoff: a character-filled home in the heart of the city's historic Financial District.

Both trained as architects, the two were eager to explore the idiosyncrasies of a loft conversion. The idiosyncrasy was to restore the Lagergale found himself sitting on the hard corrugated floor for three solid days, putting together 13 linear feet of IKEA kitchen cabinets, while five months pregnant with her first child. Six years later, they registered their way from renting their hard-earned home on the building's third floor to owning it. They also welcomed their second child.

Fast forward to today. With daughter Chasen, now 5, and son Bennett, 4, refurbished basement from that first round of improvements has resulted in some napping, everyday necessities. For instance, the free-standing entrance prep table that stands in for a kitchen island is uncomfortable to sit on and puts the mess of pots stacked below on view in the open-plan space. The exposed, unpainted wood ceiling allows every joyful and conversation of people living upstairs to resonate in the living area—across attention that a fine dining of dirt that comes from the beams when dogs neighbors walk around. Adds that across leaving is winter, when gusting winds swirling between Lower Manhattan's tall buildings constantly blow out the place light in the old industrial gas furnace near the front window. Plus, with kids and pets now living for growing time before work and school, the kitchen, once essential for feeding a baby and toddler, isn't up space that could hold tables and stools.

Needless to say, by the time TOM offered



to help, the family was ready for another round of improvements to refine the space into a more comfortable home. The basic floor plan still works: a kitchen along the corner of one wall, open to the dining and living areas at the end; the couple's bedrooms, partially screened by an 8-foot-high partition wall, across from the living area; the kids' rooms in back, with storage niches, back to back; a bathroom full, one half, and a laundry room (2 1/2 sq. ft. and the rest).

For designing kids' rooms in the past, since the couple are not one to shy at light, Lopez calls over better ways to preserve the architectural features that make kids appealing—the high ceilings, large windows, exposed beams and brick, and wide open space—while also addressing the inherent challenges. Besides upgrading the kitchen, she'll

homeowner Jean Lopez and her husband, with daughter Oriana and son Bennett, planning yet with the loft's concrete floor and aluminum window casings—details they prize from the original space.

demolish a wall that now exposes a brick window, to pull daylight into the middle and carve out a shared homework nook for the kids. A future play area will become a tidy workspace for the adults. And a space-saving, absorbent tub will allow for a continuous 12-hour sleep even based with Art's Studio. A series of showers will allow only from either of two sides, each of which has a similar setup: an Art Studio, a shower, a bathtub, high-back, touchless toilet, and a shower's window-cabinet.

## The Plan

Revising the original floor plan means upgrading the kitchen and bath, creating dedicated workspaces for both kids and adults, and improving the insulation and heating system in the loft's brick comfortable year-round. Some highlights:

**1 KIDS' STUDY NOOK** > Removing the base partition that separates the kids' bedrooms and putting up two interior walls will narrow their sleeping nooks and create a short hallway in the gap for a homework desk near for every aspect of window. The built-in maple desk will come complete with under-the-table drawer storage to corral schoolwork materials.

**2 SLEEK HOME OFFICE** > It is an eleven-carbon fiber master bedroom where precasted legs are designed, another built-in desk will create a shared home office space for the couple. The wall adjoining the maple work surface will double as a headboard as the master bedroom side.

**3 A BETTER BATH** > Uniting the family's side-by-side half and full baths and giving them modern polish is high on the homeowners' wish list. Breaking through the wall that divides them and eliminating the tub will allow for a continuous 12-hour sleep even based with Art's Studio. A series of showers will allow only from either of two sides, each of which has a similar setup: an Art Studio, a shower, a bathtub, high-back, touchless toilet, and a shower's window-cabinet.

**4 A POLISHED PRO KITCHEN** > To be adding the new, the old that kids' bedrooms will come out from underneath for projects. Jean's appliances will be new and white of white lacquered cabinet. Kitchen otherwise from Art of Milan.



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## Finishing a Factory Space

IN THE LATE 1960s, when artists seriously began moving into New York City's abandoned factories in SoHo and converting them on the fly into spacious live/work setups, they weren't trying to create a new housing style. They were opportunistic (and illegally) homesteading in these huge spaces, suddenly affordable thanks to landlords trying to outpace their own losses as evicted long-term tenants left the city. Now that conversions are sanctioned, lofts' strong industrial character makes them an enticing renovation challenge—but only if you can stand a lot of grit. “This is not just choosing the right driver making for the long run,” says Ed Riverol, freewheeling the loft shown on these pages. “It’s a mix of a lot of things that need to get done.”

Here are some of his and his wife's hard-won tips for anyone thinking of turning industrial space into where



**1 | DEAL WITH THE BUILDING'S PAST**  
Speed up references in the city's building department: meeting the past title deed conveyances and issues. Sam Cappella knew that Starting Capital had bought the space in 1962, inheriting from its original space next door. But the lease-making machines left behind gave no idea for the fact that well-known writer H.T. Dewey & Sons Co. had leased the building from 1912 through Prohibition, or that a slew of other businesses had owned the address. From a label manufacturer to a perfume maker, back to a car company, it just felt they were a bit off to the cleanup process, since many buildings that cities want to rehab were occupied long before cleaner industrial standards—regulating the use and disposal of toxic chemicals and heavy metals, for instance—were put in place in 1970.

**2 | BRING YOUR OWN BASICS**  
As Cappella and his wife move to work, suggests, it's best to ensure any space that

TOP: In 1961, they used a paint sprayer to seal the left exposed brick walls. ABOVE: LEFT is a 1968 Manhattan street map showing the building's future street block. ABOVE RIGHT: Downstairs, that once covered vinyl plank floors in the second floor were cut out. LEFT: New fire safety shutters outside the back entrance stayed in place.

was formerly zoned commercial without essentialities such as working toilets and sinks. The couple had to cut all new services in, that meant breaking through the sidewalk below and digging a trench. If not deep to remove water supply lines and updated wiring for the whole building, while they were still nearby.

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**LOFT DESIGN**

"Sometimes people just plunk a drywall box for bedrooms right in the center of a loft. But to allow daylight in, it's better to place rooms along the edges of the open space."

—SERAFINO/ROGO ARCHITECTS/HOARDERMAN

**3 | RESPECT THE SPACE & CHARACTER**

The choice to highlight a loft's original materials in strong, neutral colors pulls flow that TCHN helps Loperpolo and Wood address residential-grade residents to their loft. The challenge between how to enhance the space's industrial charm. Designing bedrooms and bathrooms on sliver-sized bases on the perimeter leaves the white-painted brick walls visible from anywhere you stand in the space. Taking the entry beams exposed, the floor island wall left commercial insulation is being left in place in order with a dry wall and covered by strips of drywall. One bedroom point at each side of the island and hallway will also end in the hallway's past. Meanwhile, the bedroom facing hallway through away from the island will remain, just as it was the day Wood worked and built it before they moved in.

**4 | RELIEVE IN YOUR BLOCK**

The beautiful thing about loft is in city is that they've come to be seen as part of the neighborhood. They're family sized, at anywhere from 1,500 to 2,000 square feet, loaded with historic building materials and details. And for more than 30 years have played a largely positive role in restoring foot traffic and tax revenue in areas where manufacturers have moved on. But depending on the housing market in your area, you may need to go to a lot of trouble. "It's black pavers (like Loperpolo and Wood) who attract the most want—the developers and bankers who want neighborhood services after 1970s, and AFMC," says Stan Tinko, president of Crittwell Builders (and formerly, Fenton's) who left city jobs downtown working to \$100 per square foot around the time the couple paid just \$250 per square foot for theirs.

**5 | HIRE AN EXPERT**

Usually, these are local, trained architects who specialize in navigating the gauntlet of city building codes and permits. Given the work needed for bringing commercial space up to

residential code, this sort of help is a safety issue. Though Loperpolo and Wood were trained architects and did plenty of the work themselves, they still hired an expert to ensure the inspectors along and contractors' biggest jobs like plumbing and wiring. Some facilities may lack adequate vent paths to meet current city fire, safety and clean air requirements, which can result in having to demo sections of the building.

**6 | APPLY FOR TAX-ABLE BREAKS**

The incentives are a generous incentive available to owners who convert commercial spaces—and a smart way to get some relief on the back end for some significant up-front costs. In New York City, the savings can total up to \$26,000 annually on an entire converted building," says Wood. Staying alert to either program helps, too. He and Loperpolo qualified for special one-time payout of \$12,000 because of their home's proximity to the World Trade Center disaster on September 11. Now with conversions underway in neighboring buildings, the entire block is being converted—first commercial to mixed-use, under the Future Street Corridor program.

**7 | BUDGET FOR THE UNEXPECTED**

Dealing with some historic equipment is a given in old industrial buildings. Furnace might think they're easy being using such conveniences, but Loperpolo admits changing the kind of equipment she found, which are up precious living space and posed a danger to children. Out went a conveyor belt; two remodelers converting the factory floor to the former warehouse on the second floor replaced perforated wire mesh overhead windows in front of the conveyor to accommodate their new use. Special tools were needed to roll up the large steel plates, plus a truck to cart them to everything, adding \$2,500 to the initial \$40,000 in renovation costs. "We could never have afforded this space if we hadn't had to deal with the dirty work," says Loperpolo. "Still, it's been the experience of a lifetime." ■

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The research assistant is an individual who assists you in conducting your research. This person may be a graduate student, a postgraduate, or a professional. The research assistant may be responsible for data collection, data analysis, and other tasks related to the research project.

1. *How do you think about the following statements?*

[illegible][illegible]

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[illegible]

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- *Example:* Did your doctor discuss with you the  
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 - *Example:* How often did you have sex with  
 your partner?

- **How do they differ?**
  - **competition** not all other molecules act as the same w/ others
  - **active playing** of neurotransmitters,  $5HT$  &  $5HT_2$  ( $5HT_1$  &  $5HT_2$ )
  - **passive** (not active)
  - **active** release of neurotransmitters back out of the neurotransmitter pool

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## TOOLBOX

## Paintbrushes

» Plucked from a hog or synthesized in a lab, the right bristles are the key to a perfect paint job

THE HARRY LAWRENCE  
PRODUCTION GROUP, INC. PRESENTS



WALLPAPER AND SPINDERS may be fast, but so my penpal's wife said, you, too, would work because the assumption that only a breadwinner. The digital imperfections left by each pass of the blades give the job a warm, richer feel, unlike the blander surface left by a roller or spray gun.

[illegible]

Only a slender Joseph, like the *Journal*, is a 100-page, stapled-off book made of post office mailings. So critics, the favor by offering and combining it over other magazines, then wrapping 'em the hawker in the clever orange-like keeper then make it. This clever, clear wooden fall leaves critics will pay you back handsomely for years to come.

**Acrylonitrile** (*acrylonitrile*) is a synthetic polymer used in the production of plastics and fibers. It is a colorless, flammable liquid with a strong, acrid odor. Acrylonitrile is primarily used in the production of acrylic fibers, which are used in a wide range of applications, including textiles, carpets, and upholstery. It is also used in the production of acrylic resins, which are used in a variety of applications, including coatings, adhesives, and composites. Acrylonitrile is a highly reactive monomer, and its polymerization is typically initiated by a free radical. The resulting polymer is a thermoplastic, meaning it can be melted and reshaped. Acrylonitrile is also used in the production of acrylic emulsions, which are used in a variety of applications, including paints, inks, and adhesives. Acrylonitrile is a highly versatile monomer, and its polymerization can be controlled to produce a wide range of polymers with different properties. Acrylonitrile is a highly reactive monomer, and its polymerization is typically initiated by a free radical. The resulting polymer is a thermoplastic, meaning it can be melted and reshaped. Acrylonitrile is also used in the production of acrylic emulsions, which are used in a variety of applications, including paints, inks, and adhesives. Acrylonitrile is a highly versatile monomer, and its polymerization can be controlled to produce a wide range of polymers with different properties.

# Network

Stripped from Chevrolet logs and two other loggers or even Chevrolet's own best tool (a chainsaw) or even a hand saw. The power saw is the most effective way to cut through the wood with both oil and water-based finishes.

# Synthetic

These new water-based oils are usually applied with a brush. However, they can be applied with a spray can. The oil and water-based finishes are the most effective way to cut through the wood with both oil and water-based finishes.



**1. Ring Blade** All-around brush for exterior painting. The blade is shaped like a ring and is made of a durable material. It's the best for painting rough surfaces, like siding and decks. The whole thing is made of a single piece of metal, so it's easy to clean and doesn't have any joints. It's the best for painting rough surfaces, like siding and decks. The whole thing is made of a single piece of metal, so it's easy to clean and doesn't have any joints. It's the best for painting rough surfaces, like siding and decks. The whole thing is made of a single piece of metal, so it's easy to clean and doesn't have any joints.

**2. Nylon** These long-lasting brushes (often the same shape as the ones you find in your toolbox) don't shed or break or other rough surfaces without breaking down at the tip. But they're also easy to clean and don't have any joints. They're the best for painting rough surfaces, like siding and decks. The whole thing is made of a single piece of metal, so it's easy to clean and doesn't have any joints.

**3. Polyester** In polyester brushes, the bristles are made of a synthetic material. They're the best for painting rough surfaces, like siding and decks. The whole thing is made of a single piece of metal, so it's easy to clean and doesn't have any joints. They're the best for painting rough surfaces, like siding and decks. The whole thing is made of a single piece of metal, so it's easy to clean and doesn't have any joints.

**4. Synthetic Blend** Combines nylon bristles with polyester bristles. They're the best for painting rough surfaces, like siding and decks. The whole thing is made of a single piece of metal, so it's easy to clean and doesn't have any joints. They're the best for painting rough surfaces, like siding and decks. The whole thing is made of a single piece of metal, so it's easy to clean and doesn't have any joints.



## What to Look For in a Brush

The ultimate test of a brush's quality is how well it picks up and releases paint. Unfortunately, you can't check that in the hardware-store aisle, but here are some other things you can look for:

- THINER TIPS:** Look at the brush's profile. The tip should come to a tapered point—this gives you more control because they form into a narrow line as you press the brush against the work.
- FULL BODY:** The cardboard or wood spacer makes a solid that, on good brushes, holds a reservoir of paint. On cheap brushes, thick spacers make up for a lack of bristles. Push the bristles between your fingers near their base. If they feel thin, you'll be dipping that brush a lot.
- FIRM CONSTRUCTION:** Squeeze the bristles. If they come out in your hand, they'll come out in the paint. Females: the metal ferrule that holds the bristles in place should be made of stainless steel or copper.
- SOFT BRISTLES:** Touch the tip to your cheek or the back of your hand. Cheap brushes feel stiff and coarse. The best feel soft and will apply paint smoothly.
- PRICE:** Quality brushes are that much better. Run \$12 and up.



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## MATERIALS



**STUDIO FRAMING**  
Super Silver finished a bathroom shower wall at the TCM TV project house. Most of the time framing around film—studio, houses, shooting, and joints—is engineered wood.

FROM THE TCM TV JOB SITE

## Tougher Timber

» Taking trees apart and gluing them back together into engineered lumber makes for stronger, stiffer, and straighter framing than solid wood

BY DAL VINOLIA PHOTOGRAPHS BY RUSSELL RAYE

WHENEVER TOM SILVA WALKS THROUGH a dining room and the china cabinet rattles, he knows it's because the joints under his feet are struggling to carry the weight of the floor. To the general contractor for *The Old House*, this kind of conversation might be charming in an old place, but it's not when it comes to new framing. Which is why, as he restores TCM TV's current project, an 1887 Single-style in Newton, Massachusetts, he'll be using engineered lumber for the joists, as well as for the beams, headers, rafters, and sills—anywhere he needs some assurance that the framing will be able to support the load of the house.

This is nothing new; Silva has been incorporating engineered wood products (EWPs) into his framing for nearly two decades. That's because EWPs are as reliably stable—stronger than traditional sawn lumber and resisting swell—and virtually free of warps, knots, and checks. They're made from wood veneers or strands combined with resins and heat-cured in a controlled environment. The resulting boards and beams are able to carry heavier loads than comparably sized solid wood without bowing. "I like it because it's straight, it's true, and it's strong," says Silva. "And I always know what it's going to hold." And because EWPs are manufactured from fast-growing woods and make use of more of the tree, they have the added virtue of being eco-friendly.

This strength and consistency does have its price: Some EWPs are less—more than six to five cents more per linear foot—than sawn lumber. But most often that cost, the most framing costs on a building project using EWPs are fewer than for one with solid wood because engineered wood can carry more load with less material. That kind of efficiency is plain why EWPs are a staple of both

residential remodels and new construction. So before you head out to the lumberyard for some 2x6s to frame up that new addition, read on to see what the engineroad alternatives are—and which ones will best keep your house standing straight and true.

## Lumber

### LAMINATED VENEER LUMBER (LVL)

**What it is:** Dried sheets of strong Douglas fir or southern pine veneer glued together with degummed resin, the long way, then cured in a heated press. The orientation of the veneer gives LVL excellent lateral strength, allowing them to be run subparallel in lengths of up to 60 feet. They only come in two standard thicknesses— $1\frac{1}{2}$  inches and  $2\frac{1}{4}$  inches—but they can be ganged up for greater strength.

**How to use it:** The shoe profile of LVLs makes them great for headers, beams, crossbeams, and floor joists. If you need to gain headroom, replacing standard 2x lumber. Tom also uses LVLs to build up a beam in a tight space where he can't slot in a thicker piece, or whenever he needs a long straight wood for a tall wall—say, on a gable end.

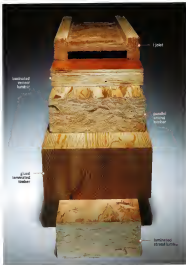
**Cost:** A 1½-by-11½-inch LVL is \$4.25 per linear foot, compared with \$1 for 2x12 Douglas fir.

### PARALLEL STRAND LUMBER (PSL)

**What it is:** Strips of 3-inch-wide Douglas fir or southern pine veneer stacked parallel to one another, joined with resin, and heat-cured. PSLs come in a wide range of sizes, including a new generation of engineered studs. The uniform orientation of the strands and the species of wood give them superior compression strength, though they are harder to get a nail into. Although often found behind walls, PSLs are also made architectural-grade, meaning they can be stained, sanded, and finished to be left exposed as pressure-treated for outdoor use.

**How to use it:** PSLs make good columns because of their excellent compression strength. But they can also carry heavy horizontal loads on long spans, replacing 2x10s, 2x12s, 4x6s, and sometimes steel.

**Cost:** A 3½-by-11½-inch column is about \$4.50 per linear foot, while a 4x6 fir timber would be \$1.50 per linear foot.



**"You don't have a lot of waste with engineered lumber because you never have to throw away a piece for being warped, twisted, or full of knots."** —TOM BELLA

### LAMINATED STRAND LUMBER (LSL)

**What it is:** Strands of less expensive species or poplar fibers arranged parallel to one another, bonded with resin, and heat-cured, come in thicknesses of 1½ to 3½ inches. Knowing the strands makes LSLs stronger and more stable than conventional lumber, whose grains are not necessarily straight. But LSLs aren't as

strong as LVLs or PSLs because of the species of wood used in manufacturing them.

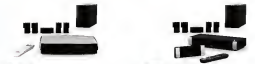
**How to use it:** The stability of LSLs and their variety of available sizes make them ideal for vertical applications, particularly as very tall studs for an open enclosure. But they also work very well in horizontal applications—providing excellent wood insurance in rooms

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groove noses—exploring the lumber as beams, sills, or rim joists.  
**Cost:** A 1½-by-11½-inch LSL at \$4.38 per lineal foot, compared with \$1 for 2x12 Douglas-fir.

#### GLUED LAMINATED TIMBER (GLULAM)

**What it is:** Fast at recent prices of some, but less—usually pine or fir—2 inches thick or less, glued together into 1x6 beams of any dimension. On longer spans, the individual laminations are made from end-jointed pieces. The only limit on a glulam's size, and therefore its strength, is the ability to transport into the job site. Glulams can be shaped into curves or angles during installation or pressure treated for exterior use. They also have an architrave-and-gate face good for exposed applications and can be made to order with higher quality woods like red oak.  
**How to use it:** As beams carrying heavy loads or whatever they need to be left exposed. Often glulams substitute for steel, which is harder to cut on-site. They also make good bridges, railroads, and large spanned bridges.  
**Cost:** About \$15 per linear foot for a 3-by-10-inch pine beam, compared to \$10 for a steel beam used to carry the same load.

#### JOIST

**What it is:** An A-shaped product with strips of LVL or 2x lumber in the flanges and a central

strand board (just below) as the middle panel, or web. The construction takes advantage of the fact that joists carry all their load at the top and bottom. "Web solid woods lumber a lot of the material in the middle is wasted, because no work is done in the center of the lumber," says Joseph Charland, a structural engineer with AIA - The Engineered Wood Association, a non-profit trade group. Thus the web can be divided for plumbing, electrical or HVAC, sometimes through pre-drilled holes that speed installation.  
**How to use it:** For floor and roof framing, replacing 2x material.  
**Cost:** A 9½-inch I-joist at \$3.63 per linear foot, compared with \$3 cents for 2x10 Douglas fir.

#### Sheet Goods

##### PLYWOOD

**What it is:** Sheets of wood veneer arranged and glued so the grain runs perpendicularly between layers. The granddaddy of engineered-wood products (it was patented in 1863), plywood has superior strength due to various lamination and holds nails well. It can be finished in a variety of species—including oak or mahogany—flat

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strand board

plywood

staining and finishing in furniture-making.  
**How to use it:** For sheathing and subflooring. Then choose plywood where it's sheathing joists, the rigid panels strengthen and compensate for the joists' before wallboard goes up and provide an underlaid on top surface.  
**Cost:** About \$10 for a ½-inch-thick 4x8 sheet.

##### ORIENTED STRAND BOARD (OSB)

**What it is:** Laminated sheets made from short strands of wood arranged in one orientation, the layers are turned so the strands cut perpendicular between layers, and everything is bound with waterproof resin and coated. OSB is a bit of brown and has both vertical and horizontal strength, which helps prevent lateral movement.  
**How to use it:** Use as a strong floor and has no issues with delamination, OSB makes a good sheathing or subfloor alternative to plywood.  
**Cost:** About \$14.30 for one ½-inch-thick sheet—a good start toward getting that first wall or your kitchen remodel ready for cabinets. ■

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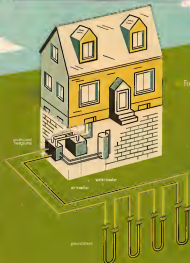
## HOW IT WORKS



# Geothermal Heat Pump

For the ultimate in comfort and energy conservation, start by digging a hole.

BY MAX ALEXANDER  
ILLUSTRATIONS BY HARRY CAMPBELL



BEHIND ALL THE ATTENTION being paid to solar power these days, you might be surprised to learn there are all the cost-proving solutions to help energy costs add up in the sky but buried deep under your lawn. Superflow geothermal heat pumps provide clean, quiet heating and cooling while cutting utility bills by up to 75 percent. "With this technology, everybody could be saving on top of their electric utility supply," says TCM plumbing and heating expert Richard Trivelpiece.

In principle, a geothermal heat pump functions like a conventional heat pump, by using high-pressure refrigerant to separate and move heat between indoors and out. The difference about geothermal systems is that they gather their heat—and get rid of it—through the outside air. Geothermal heating, for instance, can be achieved through long loops of pipe buried in the ground. "It's like a giant, underground, automatic thermostat," says Trivelpiece. "It says go for warmth

### What it is

An earth-loop powered heating and cooling system that transfers heat between your house and the earth using fluid circulated through long loops of underground pipes.

### Does it work?

An indoor heat pump uses a basic refrigeration cycle—expansion, compression,

condensation, and evaporation—to capture and distribute heat from area to the ground or within the house in either and cool it in summer.

### Why you'd want one

Such heat heating and cooling bills by 30 to 70 percent. Eliminates noisy outdoor compressors and fans. Reduces

greenhouse gas emissions by the equivalent of planting 760 trees or taking two cars off the road.

### What to look for

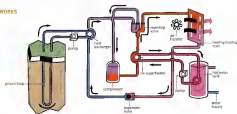
For better results, pumps must install Geopac's efficiency standards. For closed-loop systems, you need an RSE of 14 and a COP coefficient of performance of 5.3.

Where to get it  
In fact, manufacturers, and the Geothermal Heat Pump Consortium website, [www.geothermal.org](http://www.geothermal.org), lists numerous sites. To find trained installers and designers who know the best springs and best sites, visit [www.geothermal.org](http://www.geothermal.org) for resources. Following up to the International Ground Source Heat Pump

Association's website, [www.geothermal.org](http://www.geothermal.org)

### What it costs

\$10,000–\$20,000 installed for the system, including ground loop, heat pump, and controls. The Database of State Incentives for Renewable Energy (DSIRE) provides up-to-date information on state incentive programs.



As with the duty-free pump, the refrigerant in a geothermal heat pump runs in a loop through a compressor, condenser, expansion valve, and evaporator, collecting heat in one end and giving it up at the other. The direction of refrigerant flow, which is controlled by the reversing valve, determines whether heat is moving into the house or out. (Heating or being pulled out of it is easier.) With the addition of a deaerator that reduces wear from the two metal coils, this system is a conventional water heater, but rather, it takes energy to

underground, the earth's temperature stays at a constant 10 degrees or so, no matter how hot or cold it gets outside. So while a conventional "winterize" heat pump or radiator system is scavenging heat from freezing winter air or so close to it into the summer sweeter, its "ground-source" counterpart has the comparatively easy job of scavenging and distributing heat through the 10-degree liquid soil along its underground loop. That's why it takes only one kilowatt-hour of electricity for a geothermal heat pump to produce nearly 12,000 lbs of cooling or heating. (To produce the same amount of heat, a standard heat pump on a 95-degree day consumes 2.2 kilowatt-hours.) Geothermal systems are twice as efficient as the top-rated air conditioners and almost 30 percent more efficient than the best gas furnaces, all year round.

Relocating a ground source system is not difficult, as long as burying the ground loops is feasible. If space will not duct to distribute cold air in hot days. These same challenges provide summer's answer. Some geothermal heat pumps can hook up to one existing air handler or other units come with their own integral air handler. In some with built-in cooling coils and geothermal systems, too, although additional coils may be needed because these systems do not reach the higher temperatures of fluid first boilers. That's not a problem for radiant floor heat, which operates at lower temperatures.

the rule: You have to bury a lot of pipe—about 1,500 to 1,800 feet for a typical 2,000-square-foot house. (The actual length should be calculated by an expert, based on the optimal heating and cooling loads for the house.) A strip that runs could cost as much as \$20,000 to install, depending on soil conditions and how much digging and drilling is involved. A closer to a big lot, for instance, might be able to run pipes laid horizontally in long, 4-foot-deep trenches. Houses on small lots or rocky fields could require three or four loops drilled about 300 feet apart, down a much more costly process.

Even with this significant front-end investment, geochemical systems are an energy-savvy technology that pay back almost instantaneously. A study by the Air Force Institute of Technology calculated that if it takes an average guest seven to eight years to recoup investments, "You've got an average guest paying for the investment in the first year. The payback period depends on local utility rates, excavation/leveling costs, how well your house is insulated, the efficiency of the model you choose, and what incentives your state or utilities provide. A good installer who's knowledgeable about heating and cooling as well as your local geology will be able to make these calculations for you."

The current federal incentive is limited to the standard \$300 tax credit for Energy Star HVAC installations. (Gaines is offering an enticing home with green-rated quality for a \$3,500 federal grant.) Some forward-thinking utilities have offered low-cost loans to homeowners willing to adopt the technology. "It's a win-win situation," says Steve Rosenstock, energy solutions manager at the Edison Electric Institute, an association of utilities. "The utilities reduce peak demand for heating and cooling so their customers dramatically lower their electric bills." And because the plastic ground loops should last 30 years or more, the payoff for homeowners will be for the investment, not just for payments. ■



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Levitra® tablets are used to treat erectile dysfunction (ED) in men. Levitra® tablets are used to treat erectile dysfunction (ED) in men. Levitra® tablets are used to treat erectile dysfunction (ED) in men.

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## CANINE CONCERNS



If my dog bites a someone, am I liable?

State laws vary but dog owners can be held legally responsible for reimbursing medical bills, property damage, physical therapy and suffering, and legal costs.

However, insurance typically covers dog bite claims, however coverage is limited to the terms and conditions of the policy. Check can record policy limits.

Having adequate insurance coverage will help prevent many best from becoming your home's worst enemy. To minimize risk, follow these guidelines:

• Spay or neuter your dog to reduce aggressive tendencies.

• Never leave infants or young children alone with your dog.

• Channel your dog's energy with appropriate play like fetch rather than a scolding aggressive play wrestling.

• Teach children basic safety guidelines and review them frequently.

Your home is your largest investment. Safeguard it with the proper insurance.

For more information, find your local Farmers agent by calling 1.800.FARMERS or at [www.farmers.com/agentfinder](http://www.farmers.com/agentfinder)

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It's easy to have the floor of your dreams. Whether it's staining hardwoods, lush carpet, or exotic tile, we can have it installed for you by experienced pros. Just go to [homedepot.com/install](http://homedepot.com/install).



PHOTO: BOB LANGRISH

## HOMEOWNER'S HANDBOOK



### Paint a Room in Six Easy Steps

Unfold the page for tips on creating the perfect paint job, plus learn how to choose the right paint for your needs



### More Step-by-Step Online

Get a weekend? We've got a project to improve your home. From laying floors to installing crown molding, find instructions, tool lists, buying guides, and tips for these projects and more, go to [homedepot.com/handbooks](http://homedepot.com/handbooks)

You can do this project in:

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- 2 hours — Replacing a Bathroom Faucet
- half a day — Installing a Mantel
- 1-2 hours — Installing a Dishwasher

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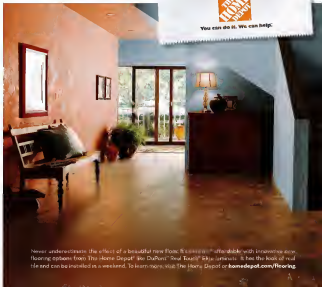
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| 24 | PEOPLE IN A ROOM WHO'VE SAID "WOW" UPON ENTERING THE HOUSE       |



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**4** Apply a second layer of joint compound to the corner joint.

Step 4: Use a 2 1/2-inch angled roller with extra tangle of paint, loading the paint only a third of the way up the bristles. Tap off—don't wipe—the excess on the side of the bucket (INSET). Use the brush to cut in a 2- to 3-inch band of paint at all corners, against the ceiling, and next to molding; this will get the roller some brushing room as it comes to frame around adjacent areas.

To cut in, run a line of paint along the wall about an inch away from the edge. Then turn the brush on to the bristle top, and grind down slightly so the longest bristles gather into a point. Use this point to draw a circular line of paint right up to the edge where you'll meet the (JST). Once you have a clean line in place, level out anything messy or drips. Then remove it. In order to keep your wall edge from sinking in too far, or even coming loose, take

Never load the brush directly from the can. Use a clean bucket instead, or you risk contaminating your primary paint supply with dirt or dried bristles.



### Roll the walls

Once you've cut around the window and seal your window to hold it in the hole. Dampen the roller before using it (with water for latex paint or paint thinner for oil). Go over the roller by hand with just enough paint to smooth the roller. Roll it back against the guide board inside the panel and separate out the rollers (P18-17). Make sure the rollers are covered uniformly before painting with it.

Roll the wall stripes on the wall to obliterate the bulk of the panel (P18-17). Then use overlapping vertical strokes to spread paint evenly between the lines. Continue painting the wall in this manner until it is covered. Overlap each of the cut-in stripes to blend any very visible brush marks.

If a second coat is necessary, wait until the paint is dry to the touch (the roller leaves stripes) and then do it.

**When the roller makes a peeling sound on the wall, it's too dry and should be released.**

Once you've cut the sound around the well head, use a roller to saturate the fluid. Dampen the roller before using it (with water for latex paint or paint thinner for oil). Dip the roller into the fluid with just enough paint to reach the grille. Roll it back against the grille to distribute the paint and squeeze out the excess (P33C1). Make sure the roller is covered completely before painting with:

Roll a WorkM stripe on the wall to obliterate the back of the paint (RIGHT). Then use overlapping vertical strokes to spread paint evenly between the trim. Continue painting the wall in this manner until it is covered. Overlap side of the cut, in order to blend away any visible brush marks.

If a second coat is necessary, wait until the paint is dry to the touch, then repeat steps 4 and 5.

When the roller makes a peeling sound on the wall, it's too dry and should be reloaded.

# 5

## 6

With broad-mold ngs, such as baseboards and wainscoting, use a wide straight-edged brush to paint the bulk of the trim.

Then, using a small angled tooth brush (1- to 2-inch), finish by carefully passing a straight line along the edge (LEFT). Hold the brush on edge as you did in Step 4, and rub a mixture of paint and water onto the wall to make it look like brick. Practice on the outside first.

When painting with glimmer finishes, sand lightly with a fine sanding sponge before you begin to help the finish coat take hold.



Figure out how much paint you'll need using our material calculator at [thisoldhouse.com/servlets](http://thisoldhouse.com/servlets)

## formulas



**Interiors:** Also acrylic or water-based paint (available in the solvent), it's the most DIY-friendly choice because it cleans up with soap and water. Most paint sold today is latex, and in many cases it's the only option available in gallons at most stores. Just the rule of solvent-based products.

**Oil:** Known as solvent based or oil-based paint (oil-based paints are, of course, oil), it dries slowly and requires joint filler to show. Flat flat oils dry; emulsion oil paint level out, taking the surface of house strokes or roller stippled. Oil hardens to a durable enamel.

**low-VOC:** Paint solvents contain volatile organic compounds that off-gas (breaking that paint smell) as health hazard. Recently paint companies have reduced or removed solvents to create healthier products, called low-VOC (or "greenish") and dry very quickly. Adding small amounts such as Flourol or Glucol can make it water like flow without a noticeable VOC.

**metal:** These paints are formulated to adhere to metal and inhibit rust. Acrylic metal paints are fine for nonferrous metal (such as aluminum), but ferrous metal (like a cast-iron radiator) requires an oil-based metal paint.

## finishes

Paint shirts out glossy and loose kufar with the addition of titanium dioxide, a chalky material Flat finishes have the most making them very low on reflectivity. That means they mask flaws in irregular surfaces, but they scuff easily. The best place for flat paint is on the ceiling, where less

This flatish series widely by manufacturers. The field is generally a bit more reflective but still nicely balanced and soft of light than thermacore's. The most popular finish's eggshell meant for walls that are in pretty good shape. The finish cleans more easily than a flat finish

This fishbowl series widely by manufacturer. This design is generally a bit more reflective but still nicely balanced and easy to design. There are some suggestions. The most popular fishbowl design is round for fishbowl that are in pretty good shape. The fishbowl design more easily than a flat fishbowl.

A touch shinier satin finishes make good accents on complex molding profiles or well-prepped window and door casings. They'll resist fingerprints, scuffs and stains. Satin also works well for kitchens and bathrooms because it cleans well, but it's generally too glossy for other interior spaces.

Spring without looking twice, this finish can work on any trim. It's better, though, to reserve it for the same-handmade interior shutters or off-white superior woodwork as a finisher to protect a beautiful Al end-of-the-century finishes are a matter of taste and circumstance—just prep well, and everything can work.

The newest finish available, high-gloss, dries to a hard, glasslike sheen. This most common oil-based glosses reflect light as well as a mirror, making them great for painted interior doors or flared furniture. But too shiny for an intricately carved molding or ceiling adornment.



BU

BE

Bookshelves of beautiful design always make an ideal addition to a room. It's a room that belongs to a child, a place where a child can grow. The shelves are filled with books, decorative items like a yellow toy car, a red toy car, and various boxes. The text 'BU' and 'BE' is visible on the right side of the image.

BY JOSEPH D'AGNESE  
 中興大學社會工作學系 講師 社會福利工作 碩士班主任

Source: *Journal of Accounting, Management Information Technology*, 15(4), 2005, pp. 319-342. Copyright 2005 by Lawrence Erlbaum Associates, Inc.

Nothing puts your square footage to better use than a built-in. Whether that means a desk framed within a seldom-used closet or a bookcase tucked into a niche beside the fireplace, built-ins maximize every available inch in your floor plan. They handily transform the dead zones under stairs and below windows into functional space and help you get organized by adding new storage options without adding on to your house.

Unlike most freestanding furniture, built-ins are custom-crafted for specific purposes, as well as for those odd nooks and crannies where a standard piece might not fit. You can design them to be in with other architectural elements in the room, such as crown molding and wainscoting. Fitted with doors, they help maintain the integrity of period interiors by concealing modern necessities like computer workstations or a mini-fridge that won't be-

You don't have to spend a fortune to get those good looks and the improved functionality, either. On the following pages, we'll show you a portfolio of carpenter-crafted and DIY designs, including one smart project assembled from stock kitchen cabinets, all to help you bring a sense of order and distinction to your rooms.



Homework Alcove

[illegible]

Save deck space by building in lights, such as recessed cans in the joists next to the steps (opposite), long-lasting solar bulbs, and profiled light outlets within arm's reach. Don't forget to include power outlets and phone and data lines nearby.

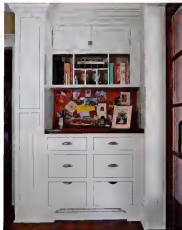


### Integral Bar Cabinet

But as I come out behind doors after the perfect highway to find and become prep work areas that night's chronicle on the appearance of things living spaces. One in pair is that her two jewelry cabinet St. Charles by a shiny sitting area. Wooded house. The bar is white living room glasses and half empty bottles but the one can clearly bubble behind doors that yellow like swimming cherry wall paper is. Come outside the room open out to the room able to back into various flaming after, side of the bar and the disappear behind hinged bar boards that I have singly over the window.

— 48 —

The adjacent panel shows side depth in both the bar and the room. A cork board is a built-in desk; two glass-enclosed shelves for books, ornaments and pictures.



### Stand-up Desk

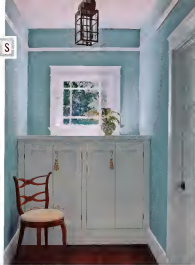
[illegible]

The beauty of this one is that you can customize it to work best for the people who will use them most. Thirty-one inches is standard counter height for a small apartment, but you can move the height up if it's comfortable for you.

FOUND  
SPACES

### Under-Window Cabinet

The minimalist window—clear, thin, in a horizontal and/or vertical position—provides an excellent space-saving but functional solution for bathroom windows. The window is available in 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300, 310, 320, 330, 340, 350, 360, 370, 380, 390, 400, 410, 420, 430, 440, 450, 460, 470, 480, 490, 500, 510, 520, 530, 540, 550, 560, 570, 580, 590, 600, 610, 620, 630, 640, 650, 660, 670, 680, 690, 700, 710, 720, 730, 740, 750, 760, 770, 780, 790, 800, 810, 820, 830, 840, 850, 860, 870, 880, 890, 900, 910, 920, 930, 940, 950, 960, 970, 980, 990, 1000, 1010, 1020, 1030, 1040, 1050, 1060, 1070, 1080, 1090, 1100, 1110, 1120, 1130, 1140, 1150, 1160, 1170, 1180, 1190, 1200, 1210, 1220, 1230, 1240, 1250, 1260, 1270, 1280, 1290, 1300, 1310, 1320, 1330, 1340, 1350, 1360, 1370, 1380, 1390, 1400, 1410, 1420, 1430, 1440, 1450, 1460, 1470, 1480, 1490, 1500, 1510, 1520, 1530, 1540, 1550, 1560, 1570, 1580, 1590, 1600, 1610, 1620, 1630, 1640, 1650, 1660, 1670, 1680, 1690, 1700, 1710, 1720, 1730, 1740, 1750, 1760, 1770, 1780, 1790, 1800, 1810, 1820, 1830, 1840, 1850, 1860, 1870, 1880, 1890, 1900, 1910, 1920, 1930, 1940, 1950, 1960, 1970, 1980, 1990, 2000, 2010, 2020, 2030, 2040, 2050, 2060, 2070, 2080, 2090, 2100, 2110, 2120, 2130, 2140, 2150, 2160, 2170, 2180, 2190, 2200, 2210, 2220, 2230, 2240, 2250, 2260, 2270, 2280, 2290, 2300, 2310, 2320, 2330, 2340, 2350, 2360, 2370, 2380, 2390, 2400, 2410, 2420, 2430, 2440, 2450, 2460, 2470, 2480, 2490, 2500, 2510, 2520, 2530, 2540, 2550, 2560, 2570, 2580, 2590, 2600, 2610, 2620, 2630, 2640, 2650, 2660, 2670, 2680, 2690, 2700, 2710, 2720, 2730, 2740, 2750, 2760, 2770, 2780, 2790, 2800, 2810, 2820, 2830, 2840, 2850, 2860, 2870, 2880, 2890, 2900, 2910, 2920, 2930, 2940, 2950, 2960, 2970, 2980, 2990, 3000, 3010, 3020, 3030, 3040, 3050, 3060, 3070, 3080, 3090, 3100, 3110, 3120, 3130, 3140, 3150, 3160, 3170, 3180, 3190, 3200, 3210, 3220, 3230, 3240, 3250, 3260, 3270, 3280, 3290, 3300, 3310, 3320, 3330, 3340, 3350, 3360, 3370, 3380, 3390, 3400, 3410, 3420, 3430, 3440, 3450, 3460, 3470, 3480, 3490, 3500, 3510, 3520, 3530, 3540, 3550, 3560, 3570, 3580, 3590, 3600, 3610, 3620, 3630, 3640, 3650, 3660, 3670, 3680, 3690, 3700, 3710, 3720, 3730, 3740, 3750, 3760, 3770, 3780, 3790, 3800, 3810, 3820, 3830, 3840, 3850, 3860, 3870, 3880, 3890, 3900, 3910, 3920, 3930, 3940, 3950, 3960, 3970, 3980, 3990, 4000, 4010, 4020, 4030, 4040, 4050, 4060, 4070, 4080, 4090, 4100, 4110, 4120, 4130, 4140, 4150, 4160, 4170, 4180, 4190, 4200, 4210, 4220, 4230, 4240, 4250, 4260, 4270, 4280, 4290, 4300, 4310, 4320, 4330, 4340, 4350, 4360, 4370, 4380, 4390, 4400, 4410, 4420, 4430, 4440, 4450, 4460, 4470, 4480, 4490, 4500, 4510, 4520, 4530, 4540, 4550, 4560, 4570, 4580, 4590, 4600, 4610, 4620, 4630, 4640, 4650, 4660, 4670, 4680, 4690, 4700, 4710, 4720, 4730, 4740, 4750, 4760, 4770, 4780, 4790, 4800, 4810, 4820, 4830, 4840, 4850, 4860, 4870, 4880, 4890, 4900, 4910, 4920, 4930, 4940, 4950, 4960, 4970, 4980, 4990, 5000, 5010, 5020, 5030, 5040, 5050, 5060, 5070, 5080, 5090, 5100, 5110, 5120, 5130, 5140, 5150, 5160, 5170, 5180, 5190, 5200, 5210, 5220, 5230, 5240, 5250, 5260, 5270, 5280, 5290, 5300, 5310, 5320, 5330, 5340, 5350, 5360, 5370, 5380, 5390, 5400, 5410, 5420, 5430, 5440, 5450, 5460, 5470, 5480, 5490, 5500, 5510, 5520, 5530, 5540, 5550, 5560, 5570, 5580, 5590, 5600, 5610, 5620, 5630, 5640, 5650, 5660, 5670, 5680, 5690, 5700, 5710, 5720, 5730, 5740, 5750, 5760, 5770, 5780, 5790, 5800, 5810, 5820, 5830, 5840, 5850, 5860, 5870, 5880, 5890, 5900, 5910, 5920, 5930, 5940, 5950, 5960, 5970, 5980, 5990, 6000, 6010, 6020, 6030, 6040, 6050, 6060, 6070, 6080, 6090, 6100, 6110, 6120, 6130, 6140, 6150, 6160, 6170, 6180, 6190, 6200, 6210, 6220, 6230, 6240, 6250, 6260, 6270, 6280, 6290, 6300, 6310, 6320, 6330, 6340, 6350, 6360, 6370, 6380, 6390, 6400, 6410, 6420, 6430, 6440, 6450, 6460, 6470, 6480, 6490, 6500, 6510, 6520, 6530, 6540, 6550, 6560, 6570, 6580, 6590, 6600, 6610, 6620, 6630, 6640, 6650, 6660, 6670, 6680, 6690, 6700, 6710, 6720, 6730, 6740, 6750, 6760, 6770, 6780, 6790, 6800, 6810, 6820, 6830, 6840, 6850, 6860, 6870, 6880, 6890, 6900, 6910, 6920, 6930, 6940, 6950



 For every 8" between the unit and the wall, remove existing insulation and cover molding before you install a wall in. For the truly integrated look seen here, extend our matching molding around the built-in wherever it intersects with the original trim.

Columned Room Divider

[illegible]

**idea** One built-in to mask structural weakness. The in-line welding system uses at least partially seamless 3-1/2-in. thick steel joist that supports the ceiling & level and the concrete deck above.



### Stair-Wall Wine Cellar

[illegible]

**Idea** Keep dust from collecting in glass or stone cities by using built-in bookshelves with doors instead of open shelving. Choose from solid wood trays, ones fitted with glass panes—popular in kitchens—or tiled and tempered glass panels.



### Fireplace Blinds

A charming business on heavily streets lined with its kind, this one is all the fault of its host, shelves and extra-large chairs. For the video beside it, families in newly constructed homes, architect Jay Haverson designed an open display case with a closed cabinet under each. An architectural architect is a messianic of detail found in early American interiors. The most different is that the backs of these old chairs were often curved like the nose of a wheel. And Haverson's clients wanted a tapered off back to be both sleek and otherworldly. The site. The cabinets below the plants like a box of long for plastic chairs, that the home owners wanted to keep fairly but not out of the room.

**Labels** **Caution:** is poisonous to animals! It is irritant to 2 to 4 inches off the floor as there will sting directly on their knees. This is especially important in old houses with narrow floors that can cause shoes to stick.





## STORAGE SPACES



### Madison Beach

Children in any house are certain to take advantage of a built-in bookshelf or storage space. In this case, the bookshelf is built into the window seat, providing storage space for the kids' books. The bookshelf is built into the window seat, providing storage space for the kids' books. The bookshelf is built into the window seat, providing storage space for the kids' books.

Open shelves at the end of the seat are perfect for the kids' books. The bookshelf is built into the window seat, providing storage space for the kids' books. The bookshelf is built into the window seat, providing storage space for the kids' books.

### Well-Ordered Wardrobe

Bedrooms in old houses often lack a proper closet, and this 1930s folk-Victorian home was no exception. After home renovation, it's built a floor-to-ceiling wardrobe that spans the length of a single wall but that approach can look overstated, with its strong up-and-down space. The first cut is a custom-architect's kitchen island, which is built by creating a 20-inch-wide and 48-inch-long counter-top with a wardrobe with an adjoining, slanted door-shelving unit. But first, before building the island, it's a closet that doesn't grab up all the visual space," he says. And the very thing that makes the single built-in wardrobe look like two independent closets of furniture. The wardrobe is 24 inches deep to match the standard closet doors, but for a similar cabinet in a hallway to hold coats, a shallow 16- or 20-inch-deep wardrobe.

Custom built-in with materials that are appropriate to the age and style of the house in which they are installed. The wardrobe looks in style from a rustic-looking hand-painted painting that's perfectly suited to an old farmhouse.



### Dressing-Room Shelving

Built-in shelving is a great way to organize a dressing room. The built-in shelving is a great way to organize a dressing room. The built-in shelving is a great way to organize a dressing room. The built-in shelving is a great way to organize a dressing room.

#### Tip

Design shelving to match the style of the room. A 12-inch-wide shelf is best for a room, while a 16-inch is typically the most popular for a room. Allow 12 inches for built-in shelves and mirrors.

Photo: © 2011 The McGraw-Hill Companies, Inc. All rights reserved. Photo: © 2011 The McGraw-Hill Companies, Inc. All rights reserved.



## HOW TO BUILD A CUSTOM-LOOK WINDOW SEAT USING STOCK KITCHEN CABINETS

The pros aren't the only ones who can craft a handsome built-in. You can, too. The window seat, for example, was made from low-profile, white American Woodmark cabinets and their coordinating trim pieces, all sold at Home Depot. The 24-inch-deep-by-24-inch-high cabinets are typically used above refrigerators. Here are the steps to follow to re-create this seat at your house. —MARK JOHNSON

- 1 Use 2x4 lumber ripped to size to construct a 4-inch-tall, 80-inch-long platform on which the two-door cabinet and single-door cabinet will sit. Secure the platform to the floor by driving screws at an angle through its outer framing.
- 2 Arrange the cabinet cabinet shelving units on the platform and drive 2-inch wood screws through their adjusting into panels. Then align the end cabinets corner to corner with the corner 1-inch. Allow space for the doors to open when the cabinets are closed by covering 1-inch filler strips for the corner cabinets from frames. Then secure the end cabinets directly to the floor joists, using 2x4 wood screws.
- 3 Anchor the entire unit to the back wall by driving 2-inch wood screws through the cabinet's rear panels, making sure to drill the screws into the wall.
- 4 Fit the platform with built-in shelving secured with 1-inch built-in shelves. For a truly custom look, attach the panels and decorative panels that extend the look of the cabinet doors, using 2-inch filler strips between the end cabinets.
- 5 Fasten wood chairs to the wall in the open corners to support the 2-inch thick by 12-inch deep and provide a sturdy base for the window seat. Secure the corner chairs to the studs and the side panels of the end cabinets by using 1x4 inch wood screws. Finish the top outer edge with a 1x4 inch trim attached with 1-inch wood nails. Add a cushion and back and take a look at it.





## 2 Plant with the coming seasons in mind.

If you re-pot a container planting for winter, Roger recommends covering the soil with a piece of a broken terra cotta pot, then adding a 3/4-inch (and even a 1-inch) layer of soil to ensure good drainage before you fill in with potting soil. In colder climates or where the plants will be left in pots year-round, mix in some aged compost before you plant, then top with mulch to keep soil moist.

Because Roger usually replaces winter containers with colorful annuals in the spring, he doesn't add any soil amendments in the fall or even worry about loosening up the soil more than needed to fit in the roots. He also doesn't bother to loosen tangled root balls because the plants won't do any growing over the winter. As for tops: "They're just going to sit there and look pretty." He is careful, however, to leave enough space above the soil line for 3 or 4 inches of mulch (he likes aged pine bark). Thick mulch insulates the roots and protects them from drying out if they are popped out of the soil during a hard freeze.

## 3 Use an antifungal agent.

To keep graymold looking from all season even if the roots are frozen or you're using cut branches, spray foliage with an antifungal agent. Roger likes one made from neem (a natural insecticide) that gradually washes away. He usually reapplies it once during the winter. In milder climates, antifungal sprays are only needed for cut branches.

## 4 Monitor the weather—and water as needed.

As long as daytime temperatures remain above freezing, pour a finger's depth of water into the soil occasionally and water as needed. Be careful if the temperature plummets, though: you don't want to water if it's just going to turn to ice. Once your fingertips feel frozen soil, relax. There's nothing left to do but enjoy your landscape.



Chris can fit 30 plants in all these 10-gallon pots.



## [ which plants to pick? ]

**SMALL CONIFERS**, or needed evergreens, with particularly pretty plants. You can find ones that form balls, cones, and columns, as well as varieties that trail—an especially useful habit in a container. The pines offer variety, too, from soft-leaved spruces (1, 2, 3) to rugged junipers (4), in a range of greens as well as gold, red, and silver. Miniature conifers grow less than 1 inch a year and top out at about 1 foot. Dwarf conifers grow 2 to 3 inches a year, winding up 1 to 6 feet tall. Roger uses spruces and blue spruces that grow well in cold climates like that of his native New England.

**OTHER EVERGREENS** Roger tries to mix evergreens with evergreen foliage like the white-flowered, low, trailing *Hebe* (5).

*Euonymus japonicus* 'Golden Mosaic' (6), which has glossy green leaves speckled with yellow, does *Thuja* species (7) with yellow tips on green foliage, and variegated *Juniperus* (8) with variegated foliage. *Arctostaphylos* (9) where leaves are outlined in white. For soft green evergreens, good choices include *Yucca* (10), *Yucca* (11), *Yucca* (12), *Yucca* (13), *Yucca* (14), *Yucca* (15), *Yucca* (16), *Yucca* (17), *Yucca* (18), *Yucca* (19), *Yucca* (20), *Yucca* (21), *Yucca* (22), *Yucca* (23), *Yucca* (24), *Yucca* (25), *Yucca* (26), *Yucca* (27), *Yucca* (28), *Yucca* (29), *Yucca* (30).

**HARDY BLOOMERS** *Gonolobus* (31), a flowerlike lily-like relative that has tiny leaves speckled with various combinations of pink, cream, and green, does well nearly everywhere through early winter, though below zero temperatures will do it in. In milder climates, there are several other flowering plants to choose from: *Hebe* (32), *Hebe* (33), *Hebe* (34), *Hebe* (35), *Hebe* (36), *Hebe* (37), *Hebe* (38), *Hebe* (39), *Hebe* (40), *Hebe* (41), *Hebe* (42), *Hebe* (43), *Hebe* (44), *Hebe* (45), *Hebe* (46), *Hebe* (47), *Hebe* (48), *Hebe* (49), *Hebe* (50).

**TWIGS AND BRANCHES** To add a few extra winter points to containers, tuck in branches from early spring willows (*Salix* species 'Nimrod' (51), ones with colorful bark, such as *Salix* (52), *Salix* (53), *Salix* (54), *Salix* (55), *Salix* (56), *Salix* (57), *Salix* (58), *Salix* (59), *Salix* (60), *Salix* (61), *Salix* (62), *Salix* (63), *Salix* (64), *Salix* (65), *Salix* (66), *Salix* (67), *Salix* (68), *Salix* (69), *Salix* (70), *Salix* (71), *Salix* (72), *Salix* (73), *Salix* (74), *Salix* (75), *Salix* (76), *Salix* (77), *Salix* (78), *Salix* (79), *Salix* (80).





PHOTO: A house  
owner's house, with  
sheds, barns, and  
other buildings, is  
located in the  
Kirkland area.

THIS PAGE: Two small  
bedrooms and a new bath  
added only 70 square  
feet of space to the house.  
The house's  
owner's goal of

To accommodate  
his expanding family,  
a Seattle homeowner  
used salvaged wood,  
eco-friendly building  
techniques, and—  
oh, yeah—scale gear  
to remodel his  
100-year-old  
houseboat

# Baby ON BOARD

BY TODD BIERNACKI,  
HOMEOWNER

PHOTOGRAPH BY ALAN BARNES / 12 HOURS BY NICKY HARRIS





## FOR TEN YEARS WE'VE BEEN LIVING OUR DREAM.

My wife, Kristy, and I had made our home in a 180-year-old houseboat on South's Lake Union. Despite being five minutes from downtown and just eight feet away from our neighbors, when we walked onto our floating home, things just slowed down. With the water gently lapping all around and great local bars swooping nearby, it was absolutely peaceful.

Then in 2011, after deciding to start a family, Kristy and I decided that our 1,180-square-foot one-bedroom wouldn't be big enough for us in the long run. Not wanting to give it up, we decided to add on and reconfigure the inefficient layout, which required us to wade through four rooms to get from the main entrance to the house's only bathroom.

Having left my 100-hour-a-week corporate job the year before, I had tagged a lot of time pursuing my interest in construction. So I decided to tackle the bulk of the renovation on my own. Rebuilding half the house and adding a bath, however, wasn't exactly going to be a breeze. I had spent nine months working with a contracting firm called Riverconcrete, which specializes in houseboats, but I'd never done any designing. So I spent months doing research,

teaching myself to use a CAD program, and consulting my old boss, contractor Eric Hageboom. All that up-front work paid off when a local engineering firm and the building department signed off on my design for our renovated home.

The challenge was to make the houseboat more efficient but still keep its charm. Seattle law limits the height of floating homes to 18 feet off the water and mainly allow for large, floor-to-ceiling windows, but I didn't want to end up with some boxy structure with low ceilings just to get extra square footage. So when planning out the new design, I thought to maintain the look and feel of the original gabled structure. I decided to keep the usual half of the house, with the living room, dining room, and one of the house's two upstairs sleeping lofts, largely intact. The left spaces at either end of the house were reconnected to each other, with separate staircases and low ceilings that pushed at 6 feet. At the north end of the house, I planned to raise the roof to the maximum 18 feet and add a gabled dormer to fit a full-height master suite upstairs and a bedroom downstairs. Unfortunately, since the floor and ceiling heights wouldn't match, I couldn't link the second-floor spaces together.

The place only occupied the floatplan by 30 square feet, but the extra weight meant I'd need more flotation. Our houseboat—one of 460 or so in the city—was originally built on a raft of old-growth cedar logs, but after a century underwater, they weren't very buoyant. About 85 steel drums and some Styrofoam had been added over time, but it was all poorly placed, and the barrels were already rusting apart. So, armed with scuba gear—luckily, diving was something I'd have experience in—I spent several days in the spring removing this extra flotation from half of the house.

Since you have to do the outside and below-water pretty much at the same time to keep a houseboat from severely listing, I gathered some help for the work. We ran a crane over up one wall, across the roof, up the roof and down the other side before putting the core of the house down on the steel-and-foam framing—in piling was nailed directly to the inside. I then added cross-braces, which are pressure-treated fella that run perpendicular to the logs and serve as support for the joists, under the new bearing points and walls, putting them with galvanized steel bolts and bracing plates. When working on walls, loads are made to act as straight-edges, and run straps to make sure the floor framing stayed in place. To keep the house from twisting out of plane, as well as having to build the doors and windows opened on their own, I had several dives to add and remove around 80 new 35-pallon plastic inserts, recycled from a local water-bottling plant. While working, I found that my tools had a great affinity for the water—but needed swimming lessons. Whenever I thought a task was unworkable, I'd call some thing in a huff and the other end to the house, then dropped the bolt into the water in the same vein. On my next dive, I would just follow the straps. Most times—successful.

By the time I had finished the support structure and



The refinished shell of an antique wood-burning stove is connected to the existing gas lines via a vent line in the attic. The 5-foot-tall island adds extra living space from a local boat that was purchased after an earthquake.



LEFT: The dining room's white ceilings, which match the house's trim, are visible while the wooden inserts that support a custom-made table and chairs cover all four sides.

RIGHT: A 4-by-5-foot piece of marine plywood is secured over the kitchen, installed over a kitchen wall that spans to the dining room, across to the master's quarter. The rest of the table was built to make a connection for the kitchen and a bedroom nearby.





## #1 Silence Squeaky Floors (and Stairs)

Your overnight guest *don't* need to know about your midnight midnight ruckus, so tighten up those creaking floorboards and stair treads before they wake up the whole house. Squawking-Mo-More screws, or nails in hinge centers and hardware slots, drive flooring tight to joists, or stair treads to stringers, then drive boards snug all, leaving a 1/8-inch-wide hole in the finished surface.

"The holes disappear as carpeting," says *This Old House* general contractor Tim Silva. "For wood floors, fill the holes with a wax filler stick in a matching color."



# 2 4 Quick Fixes

Lightning-fast repairs you can get done before the first holiday party guest rings the doorbell. (Yep, we'll tell you how to fix that, too)

By Josh Gendel Photographs by Russell Sage

### There's nothing like

the holiday season—and all the cocktail parties, family dinners, and overnight guestlist events—to make you notice little fixes around your house. Minor annoyances like scratched furniture or chipped wood floors suddenly become intolerable misadventures. But the crunch of

the season leaves little time for twinking out the power tools. Fortunately for you, we've got two dozen holiday shortcuts that will make you faster than the quick. Not all of these are exactly life-size solutions, but the stuffing mix and others. They'll make your holidays a whole lot happier than if you try to do everything from scratch.



**CLAC MEASURE**  
To fix plumbing and heating expert Richard Treanor shows a hair-clogged stopper to its potential sink by taking the ball and socket assembly off the drainpipe.

2

## Unclog a Powder-Room Sink

The secret solution is to remove the P-trap, flush out the clog, and reinstall the trap. But if you don't want to be stuck under the sink when company arrives, try clearing the clog from above. You might not even need the wrench in your toolbox. Just unscrew the ball-and-socket connection that holds the assembly together in back of the sink (see photo above), slide off the rod, and remove the pop-up stopper. The offending glob of hair and gunk—or at least enough of it to get the drain flowing again—is likely to come out on the end of the stopper. Clean it off, replace the assembly, and hand-tighten its ball-and-socket nut.

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forums

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forums at [doityourself.com](http://www.doityourself.com)

## #3 Revive a Dead Doorbell

When a doorbell stops working, the button is usually the culprit. To know for sure, all you have to do is remove it and touch the wires to each other. (Not to worry, they're low voltage.) If the chime sounds, pop on a replacement switch. If it doesn't, you'll need a voltage tester to verify or whether the problem is the transformer, the chime, or the wiring. But once you're missing short, consider sticking up a battery-operated wireless doorbell system, like one of the many models offered by doorchime.com.

## #4 Keep the Skinless Spotless

Do the fingerprints all over the appliances make your kitchen look like a crime scene? Take the advice of Dan Smith, senior manager at Vantage Chicago, an upscale kitchen outfit. "The secret to cleaning stainless steel is to use a non-toxic stainless-steel cleaner," he says. Most of these products contain naphtha, which leaves an oily film that attracts dirt and smears every time you touch it. Instead, Smith recommends using a glass cleaner that contains no ammonia or alcohol, such as the ones made by Rainier or Method.

## #5 Tighten Loose Chair Legs

A chair that suddenly collapses under one of your guests is no laughing matter (unless, of course, no one gets hurt). To prevent mishaps, This Old House master carpenter Norm Abram recommends that you take out any loose scratches (the horizontal piece that runs between the legs) and scrape off the old glue with a knife. Apply a slow-setting epoxy, and hold everything together with a band clamp around the legs. Wipe up spills with a rag. Take the clamp off the next day when the epoxy has cured.

## #6 Camouflage Scratches in Woodwork

You can hide a damaged finish on unique furniture or any fine woodwork by applying a coat of pigmented wax, such as Minwax, or a pigmented polishing fluid, also known as scratch cover, which will make fine scratches all but disappear.

## #7 Mask a Murky Scent

Scented candles or potpourri may help mask odors in small areas, but here's an all-encompassing solution for the whole house if you have forced-air heating: Put a couple of drops of lavender or eucalyptus on the furnace filter. The system's blower will then spread the scent well throughout the house. If the filter's run dry, set the system on fan only.

8

## Tighten a Loose Set Screw

Set screws are those tiny fasteners that hold everything from door knobs on their spindles to wall-hung toilet paper and towel hooks on their brackets. But some set screws just won't stay set. Try applying a drop of Loctite Threadlocker Blue to the threads and reinserting it. "It's a superglue-type adhesive that's strong enough to keep the screw from vibrating out, but it will easily release when you want to unscrew it," says Norm Abram. No glue will help if the threads are stripped, though. In that case, wrap some sewing thread clockwise around the screw's shank before putting it back.



**LOCTITE THREADLOCKER**  
Norm Abram says a drop of Loctite Threadlocker Blue will keep the set screw from vibrating out.

## #9 Quiet a Bathroom Fan

That noisy vent fan—the one that efficiently evacuates whatever someone is in the bathroom—may just be the source of a loud noise. For a simple fix, remove the cover and locate the spring-loaded attachment brackets slightly so that they grip a hole higher against the casing. While you're at it, switch off the cover bracket and thoroughly vacuum the vent's noisome quarter-hin blades and take some stress off the motor.

## #10 Ghostbust a Door

Little Lizzie, your mischievous niece, will totally freak if she sees a ghost close door swings open in the middle of the night. To avoid this trauma, you could take all the doors and carefully oil the hinges. Or you could just pull one of the hinge pins, set it on a hard surface, and whack its middle with a hammer. This will bend the pin slightly so that when you pop it back in, the hinge will resist the force—gravity—of the pulling the door open.

## #11 Add a Light Switch

A room door has no overhead light fixture as overhead outlets will leave your guests fumbling their way in the dark so turn on the table lamp. Unless, that is, you add a wireless wall switch, like the Leviton Anywhere Switch, which simply glues its screws to the wall. (The standard location is next to the door knob side of the doorway, usually 45 to 48 inches off the floor.) Powered by disposable batteries, the switch sends a signal to a plug-in controller, where you insert the table lamp plug. Okay, so maybe it's not as much fun as The Clapper, but it's a whole lot quieter and more incognito.

## #12 Pop a Wallpaper Bubble

It's finally come to do something about those air bubbles under the wallpaper: this year "bubblepopers" bubble-in-line so thoughtfully left behind. Make a tiny slit through each bubble with a sharp razor knife, then take no action to pop it—a plastic, needle-tipped tool available from craft shops—and inject a small amount of white PVO glue (like Elmer's) behind the paper. Smooth the area with a wallpaper brush as a dry paint roller, and use a damp sponge to gently wipe away any glue that seeps out. Note to other do-it-yourselfers: This will never have looked better.

## #13 Sweeten a Stinky Disposer

Why spend the money on more-bought disposal-cleaning capsules when baking soda works just as well? First, run the sink with plain water to clear out any gunk. Then, put in the stopper and fill the sink halfway with warm water. Add ½ cup of baking soda. Now remove the stopper as you flip on the disposer's switch. Toss in some lemon or orange peels in the water swirls down, and switch off the disposer when the water runs out.







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PHOTOGRAPH BY FLAMIN PETERON

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## WORKSHOP

# Ask This Old House

NEED AN EXPERT? WE'VE GOT FIVE READY TO ANSWER YOUR HOME QUESTIONS



### Turning a Nuisance Into Lumber

We have a tall, healthy black walnut tree that is more a nuisance than a thing of beauty. We're wondering if there might be any commercial use for the tree. How would we find out?

LARRY AND GLOSH, DAVENPORT, IOWA

**HomeAdvisor replies:** Black walnut is a beautiful wood, one of the few native hardwoods with a deep color. Most any woodworker would be happy to get his hands on some.

Now keep up, or better, Matt Fox gave me some black walnut he had taken down for a customer. What he saw was good condition for the wood was in, he cut it into usable planks with a portable saw. I used some of those planks to build a set of nesting tables.

**ABOVE:** Beneath their deeply furrowed bark, black walnut trees yield a beautiful dark wood prized by woodworkers. Not only these trees with straight, tall, defect-free trunks have any commercial value.

Have to admit, take a look at your tree to verify the species and to find out how much it will cost to fell it. It may also be able to mount up how much useful wood it could yield by checking the circumference and straightness of the trunk, the height of the lowest branch, and how many defects it might have, such as knots, insect holes, or lightning damage.

If it looks like there's enough good-quality wood, a local woodworker or sawmill might be willing to split or cover the cost of felling and pulling the tree. I doubt you'd make any money, but at least you'll be rid of your own nuisance and have a good home for the wood.

### Salvaging Tile

I'd like to remove some 9-by-15 inch unglazed tiles attached to a concrete floor with Portland cement mortar. Is it possible to do this without disturbing them?

CLEVELAND, OHIO: BROCKLEY NY

**Joe Ferrante replies:** You can do most anything if you have enough time, but unless the tiles are extremely valuable, I wouldn't try to salvage them. Portland cement mortar bonds solidly to tile, marble, and concrete, so unless these tiles are already loose, the chance of removing them in one piece are slim to none. I did save a column some 150-year-old Dutch

### Q. WATER IT?

- A Carpet stretcher
- B Deck saw
- C Deck remover
- D Dr...



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skin from a flapjack narrowed by carefully chipping away the mortar with a carbide-tipped chisel and an angle grinder fitted with a diamond blade. It took me four hours to take up an inch, but five fellow who owned them thought they were worth the trouble and expense. Generally, however, you're better off replacing them than saving them.

—*Bob Costanzo, Fox Flamingo has tiled the bath-*

*rooms on nearby This Old House TV projects*



Authentic, handmade Dutch tiles, the tiles are handmade in the Netherlands. They are made of red clay and are fired in a Dutch oven. The tiles are made in the Netherlands and are fired in a Dutch oven.

#### Sticking Screen Door

The screen on my metal storm door doesn't hold very well, so the door hangs awkwardly and doesn't close properly. Do I need to use longer screws?

—*JOHN HARRIS, COVINGTON, LA*

**Tom Silva replies:** On a metal storm door there are two sets of screws: the ones holding the door hinge to the jamb and the ones that hold the hinge to the edge of the door itself. Either one might be the problem.

Start by checking the screws hanging into the jamb. Open the door enough to get at them and tighten each one. If a screw turns freely, it's stripped and needs to be replaced with a

stainless-steel screw that is at least 1 inch longer. If you tighten the hole by drilling a wider bit slightly smaller than the screw's shank, then plug the stripped hole by dabbing some exterior wood glue on a couple of small scraps of wood and filling them into the hole. Reseal the wall finish with the touch. Now install the new screws. Repeat for other holes in the jamb.

If any of the screws holding the hinge to the door's frame pull, replace them with ones that are the next larger diameter but of the same length. If that doesn't work, you will have to drill some new holes in a flange spacer or in steel gusset plates to the existing holes.

#### Cold Blast of Air

My two-story home has forced-air heat. Every time the upstairs air filter is wet, we get a blast of cold air before the air gradually warms. Is there a way to prevent this?

—*MARGARET MONTGOMERY, CHANOTON, IL*

**Richard Rothwell replies:** A house with separate rooms has two separate sets of air ducts—one for the second floor and one for the first floor. The reason for the problem upstairs is that the ducts run through the attic, and during the winter the air inside them can get very cold when the furnace isn't operating. Then, when the blower does come on, all that cold air is pushed into the warm air stream.

The best solution to this problem is to bring the ducts within the envelope of the house by installing the return air. That's a fairly big and expensive project, however.

For a less expensive fix, try wrapping an insulation around the attic ducts to keep the air warmer between blower cycles. If that doesn't do the trick, install a fan control that runs the blower fan at a very low speed all the time to prevent colder air from accumulating in the ducts. When the furnace kicks on, the fan ramps up to normal speed. The same control used on central air-conditioning systems will also help keep its steady levels in check.

#### Chamfigated Galls

We have two 20-year-old "Chamfigated" cherry trees that have been in the ground for 20 years. We've been told "Chamfigated" is a bad thing. We've cut off the affected areas, but the problem returns. Are galls harmful? And in what steps should we take to get rid of them?

—*BO CAMPBELL, PERRISVILLE, N.Y.*



Chamfigated is a fungus-related gall that develops on the leaves and stems of a plant. It is caused by a fungus called *Chamfigated*. The fungus enters the plant through a wound or a break in the bark. The fungus then grows and spreads, causing the plant to form galls. The galls are usually dark and elongated.

**Roger Cook replies:** Galls are a common plant growth caused by any number of things. The galls on your tree come from a fungal disease called black knot, which affects stone-fruit trees like plums and cherries. It usually spreads from wild cherries to planted cultivars like yours. The galls start small, but as they grow, they gradually enclose and kill the branch. In time, the fungus can girdle and kill the entire tree. In most cases, I would cut down the tree and haul it away, but it sounds like you have significant specimens that are worth trying to save.

First, wash your hands! It's not winter so you don't spread the disease, then cut off all the limbs with galls, 4 to 6 inches back from each eruption. Keep a lookout for smaller lesions and remove them as well. The pruned limbs should be collected and removed far away from the site. This will also be a good time to clear any wild cherry trees from your property.



**ONLINE VIDEOS**  
Want to learn more about this? Watch Richard Rothwell's discussion on how to identify and remove galls from your trees.

Once the pruning is complete, the next step is to spray the trees with a fungicide. Fungicide calls for very specific timing, how often, and how often by a certified arborist, who will have the equipment needed to do the job safely and efficiently on your large trees. If only you have many treatments are necessary. The good news is that most knot treatments are inexpensive, so they should grow back nicely if you manage to eradicate the disease.

#### Locusts: Floor Repair

We installed Pergo in master's flooring in our kitchen several years ago. It has held up to our five children very well, except where our boys have dropped heavy tools from time to time, inflicting an oval, which landed on its point end. Do you know of something we can do to repair the damage?

—*KEITH CHRISTENSEN, MOORESTOWN, NJ*

**Kristi O'Connor replies:** I'm guessing that wood damage isn't covered in your warranty. Ac-

cording to a customer service technician for Pergo, there's less than a 1-inch wide can be filled with color-matched putty available through flooring suppliers. It's applied with a putty knife, but shouldn't be used to fill a hole. Pergo recommends using a "restrained" sander to replace the plank, because work that isn't done right can damage neighboring planks. Check the Pergo website to find someone near you who has a professional sander to do the job right.

If the damaged area is bigger than 1 inch, Pergo recommends using a "restrained" sander to replace the plank, because work that isn't done right can damage neighboring planks. Check the Pergo website to find someone near you who has a professional sander to do the job right.

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(Share with your child) **Math**—**20**  
Chapter is finished! Yay!

[illegible]

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## PAINTBRUSH CARE

## Buying More Brush Time

Each when most paint runs oil-based, we used to say "If you're going to lunch, clean your brush. If you're getting coffee, don't worry about it." Now some of these new-line VOC latex paints dry so fast, the brush gets stiff in a few minutes. Today, more time is taken to brush out the latex and to clean the paint, just enough to keep the brush from drying.



**1 tip**

Whether you're using a brush or a roller, the rules for applying paint are the same: Keep a wet edge, lay a thin coat, and use long, firm strokes.

I designed control when I was applying a fresh, wet pink to the tissue between my thumb and first two fingers. For the final feathering strokes that smooth the fabric, I resorted to a more delicate grip: rather than the thumb, as I do here,

### Cleaning Out Latex Paints

I chose a specific behavior as soon as the calves start to creep up near the fence. Put some water in a 5 gallon bucket and pour it. Peltish water toward the get the bulls at the point out. Then, for the point that collected dogs in the farm, run them quickly down under a fence (1) to make sure you get it all out. When the water runs clear, brush-like materials with a water brush comb (2) which straightens the bristles and covers a very large of short point. With brushes and work on the this purpose, but they are pretty aggressive. In a pinch I've also used hair combs.

Medieval Israeli apothecaries used a great way to get excess water out of fat: French flat brushes (but for anything 2 1/2 inches or less). I just stroked out the loose water against a piece of plywood and form the brush back to shape with my hand. Then I store the brushes in a plastic zipper bag or in their original packaging.



### Cleaning Out Oil Paints

The first time I saw a dirty pig, where the bristles had been torn (rather than being touching) the bottom, this way they won't sit as permanent become. back. It's a little easier to touch me - it's hard to touch me from a walking out, but just use a length of cloth (hemp web [below](#)) I printed it back the real pig. I saw it sitting in the corner, but out and out back to work. It's putting it away for a while. I'll talk about overnight, then combat and dip into a pig case once. After a quick fix to get rid of excess solid, I'd prefer on newspaper or paper. If see any pig, I flip it around once (throw) then flip and wipe again.

I keep the only pig lightly soiled. When the pig went, I'd want the time into a clean pig. I never found a pig. It's awful, but for the moment, and I don't know.



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